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## News Summary

### GENERAL

#### Ulster security net for Wilson

Ulster was bracing yesterday for developments this week expected to prove of major political importance: the publication of the Compton Report tomorrow and the five-day visit, starting to-day, of Opposition leader Wilson.

Stringent security measures are being taken for Mr. Wilson's visit in expectation of Protestant demonstrations. He will meet Premier Faulkner as well as representatives of the Catholic community.

Meanwhile, it is expected that a Compton report will clear curfew forces of general charges of brutality against detainees, though it may arouse some dissent over the treatment of some individuals. *Back Page.*

#### Indian restraint in border crisis

Indian jet fighters were expected to have made another intrusion into Indian air space yesterday as both Governments continued to accuse each other of military provocation. In New Delhi, however, Mrs. Gandhi, reporting to the Cabinet on her return, indicated she would use restraint in dealing with the crisis. *Page 7.*

#### hip attack

Attack of two small ships which attacked the British cargo ship, City of St. Albans, off Pakistan continued a story. Both were blacked out when they attacked, revealing the City of St. Albans 49 ft with tracer and shells.

#### World Cup win U.S. pair

U.S. won the World Cup competition, Jack Nicklaus 69, 71, and Lee Trevino 69, 71, 83, beating South Africa's Gary Player and Harold Higgs by 12 strokes. England's Jacklin and Peter Oosterhuis finished sixth. *Back Page.*

#### dy Fleming here

Fleming, widow of the disgraced penicillin was flown London yesterday after being released from Greece, where she had been sentenced to 16 months for allegedly plotting to help a Greek prisoner escape. Her release was suspended for eight months because of her poor health. The Greek Government said she had been denied of her Greek citizenship.

#### ree escape in Dartmoor

Set up roadblocks around moor after three prisoners over the prison wall in the first escape for over 20 years. The men involved were sentenced of between 10 and ten years.

#### ester nanen can get money in you it.

Queen led the nation's grief to the death of two wars in the traditionalembrance-Day service at theaph in Whitehall. After hundreds paid their per- tributes.

#### Euston show

MP Leslie Huchford has a Commons question asked British Railways should rectify to tell passengers they are being watched— cameras high in the roof adon's Euston station. BR hey are for crowd control.

#### round of the SALT opens

by in Vienna to-day. *Page 4.* Snowden was "satisfac- in a London hospital after operation—the second this for what was described as nor ailment." No details given.

Premier Castro hinted at le military aid for Chile peech at Santiago. *Page 7.* um Bond 2E2 020802 won eeks £25,000. The winner n Wigwagshire.

people died, three were hen their car hit a lamp rd in Glasgow.

one engineers were work- restore full services on 's Mansion House (626) ge after a fire damaged ent there.

### BUSINESS

#### Mobil has £13m. plan for Coryton

MOBIL OIL plans a £13.5m. expansion at its refinery at Coryton, Essex, to raise capacity from 140,000 barrels a day to 180,000. Among other improvements, crude oil storage is to be increased by two 650,000-barrel tanks. Other oil groups also responding to expectation of higher demand include Esso and Amoco, at Milford Haven; Shell at Shell Haven and Stanlow; and BP which is studying plans for Grangemouth. Overall U.K. refinery capacity, now 2.25m. barrels a day, is likely to reach 2.7m. by 1973 and 3m. by 1975. *Back Page.*

FIRST OFFER FOR SALE of shares in U.K. North Sea oil and gas company is to be made this week. One quarter of the 8m. 10p shares of Oil Exploration (Holdings) will be offered at 40p each. The company, formed in 1964 by Ionian Bank and others, has a 4.26 per cent. stake in a consortium led by Phillips Petroleum—which, with the Arpet group, supplies natural gas to the Gas Council from the Hewett Field off Norfolk. *Pages 27 and 28.*

#### French move could affect Jaguar jet

FRENCH PURCHASES of Jaguar (Anglo-French) tactical support aircraft, for which Rolls-Royce makes engines, may be affected by the possibility that France may buy back from Israel the 50 Mirage V jets on which President de Gaulle put a sales ban in 1967. In secret talks Israel, it is said, has insisted that it resells the Mirages, which are still in France, they must not be sold by France to an Arab State or any other country. The Mirages are destined for France's Air Force, it is believed. *Page 27.*

AIRLINE PROFITABILITY is the subject of a major review started by IATA, the world airlines' body. A preliminary report is planned for next March to outline possible improvements. Stated aims include stress on innovations and productivity, and more unity in market policies, notably over demands for low fares. *Page 11.*

NON-RETURNABLE PACK- AGE problem should be studied by a Government-backed working party, Cadbury Schweppes has suggested to the Environment Department. This follows talks between Lord Watkinson, chairman of Cadbury Schweppes, with the Friends of the Earth, the anti-pollution body which made the company the target in its campaign against non-returnable bottles. *Page 4.*

TALKS WITH UNION leaders have been requested by the Labour Party to draft an Industrial Relations Bill, for a future Labour Government, replacing the new Act. The talks, involving the TUC, Labour Party national executive and the Labour Parliamentary group, will be part of discussions on public ownership, multi-national companies and an economic policy. *Page 27.*

#### Engineering pay contest

ENGINEERING EMPLOYERS answering unions' claim for an extra £700m. — including an across-the-board rise, higher minimum rates, equal pay, a shorter week and longer holidays — likely to answer to offer only a small rise in the minima. The employers will make no across-the-board offer, it is thought, and will firmly defend the 40-hour week. The national talks may break down, in which case claims on individual employers could follow. *Back Page.*

WEST GERMAN METAL workers' union chiefs, meeting to-day, seem likely to decide to call a strike in the Stuttgart area to back an 11 per cent. pay claim, following a 90 per cent. majority in a strike ballot. But yesterday an employers' spokesman spoke of renewed negotiations on a 7 per cent. rise for 12 months. *Back Page.*

MARLING INDUSTRIES first-half profit has risen to £145,000 (£123,000), helped by the consolidation policy. Interim is again 5 per cent. Marling has agreed terms to acquire Euro-drugs, a chem. supplier of fibre bonded adhesives. They acoustic insulation materials and gear in court next month. *Page 28.*

## Crucial Rhodesian talks open to-day

BY BRIDGET BLOOM AND TONY HAWKINS, Salisbury, Nov. 14.

THE decisive and possibly final round of Anglo-Rhodesian settlement talks starts here to-morrow when Sir Alec Douglas-Home is scheduled to hold a private meeting with Mr. Ian Smith soon after his arrival.

At this meeting, the programme will be finalised for the ensuing days, which will involve Sir Alec and his team in talks not only with Rhodesian Government leaders but also with "representative Rhodesian opinion."

There is considerable optimism here, although with so many past failures there are few people who, at this stage at least, will take an outright bet on a successful outcome. Part of the trouble is that so few details are yet known of what has so far been agreed at the painstakingly slow exploratory talks.

best to keep the actual content of the discussions secret. The points at issue are only too clear, although it is widely accepted that scope for compromise does exist. The main question is still whether that compromise can be kept to the satisfaction of Sir Alec within the five principles. It seems probable that Mr. Smith—for all his bluster about not compromising on his principles—has already conceded the first British principle of progress towards majority rule. But one crucial point in any settlement must be how and when that majority rule is achieved.

There are two elements in negotiations on this issue. The first is the constitutional machinery for achieving majority rule, and the second is the time scale.

It has been reported (and never denied) that Lord Goodson's talks included the possibility of a two-stage deal whereby Africans in Parliament would progress towards parity with Europeans after which, in an obscurely defined way, they would advance to a majority position. This begs all sorts of practical questions, not least the extreme difficulty of defining at least a decade in advance the machinery for the achievement of the second stage.

What seems more logical is a reversion to a Tiger/Fearless formula with entrenched blocs of black and white seats in Parliament and a middle area of common seats to be chosen by a common roll with a fairly stiff education/income franchise qualification.

This is where the time factor enters. From the British viewpoint, seeking "unimpeded progress towards majority rule,"

there are too many ways in which a Rhodesian Government could hinder such progress merely through its control of the administrative machinery—African education, delimitation of constituencies and even job reservation.

### Time scale

The real gap is likely to be about the time scale on the Rhodesian idea of African advance as enshrined in the 1969 constitution envisages eventual parity between the 275,000 "Europeans" (whites, coloureds and Asians) and the 5.2m. blacks when both groups pay equal amounts of personal income-tax. Tax figures published at the week-end for 1970 show the African contribution at just over 1 per cent. of the total. It has been estimated that even on favourable assumptions it would take some 500 years to reach parity.

In other words, even if the two sides can manage to agree on the ultimate objective and on the means of approaching it, there would still be tough haggling on the time scale.

Intimately tied in with the first principle is the second, requiring guarantees against retrogressive amendment of the constitution. It is thought that Sir Alec would be prepared to abandon the "external guarantee" of appeal to the Privy Council—ostensibly the reason for failure of the Fearless talks. However, it is believed that he will insist strongly on an internal guarantee of securing a "blocking" quarter or third of elected Africans without whose agreement amendment of the

entrenched clauses of the constitution would be impossible. To put it crudely, the difficulty here from the British point of view will be to ensure that the "blocking" group of Africans is large enough to obviate the danger of their being "bought over" by the Rhodesian Government.

A possible variation which has been suggested recently is that any amendment to the entrenched clauses should have to be supported by the majority of elected Africans. But it is hard to see Mr. Smith being prepared to accept this.

Principle Three—an immediate improvement in the political status of the Africans—is likely to have proved the least demanding obstacle. It is quite feasible to extend the franchise to do this (on a lower or African roll) without affecting representation—which is what really counts.

But Principle Four poses a major snag. This calls for progress towards ending racial discrimination. The Fearless agreement called for the establishment of a commission to study and make recommendations on the problems of racial discrimination, including what is now the Land and Tenure Act. Thereafter, there would be a standing commission established to review progress.

Since Fearless, the Land Tenure Act (replacing Land Apportionment) has been introduced and entrenched in the new constitution, which the previous Land Act was not. Recently, too, the Rhodesian Government has been showing signs of intending to implement the Act by the removal of Africans from mission land in white areas. It has subsequently

Continued on Back Page

### Theories

One theory is that the cautious and pessimistic noises which have emanated from both Sir Alec and Mr. Smith in the past week or two cover up an already very wide area of mutual agreement. Both men, those who support this view argue, must appear pessimistic to avoid, for their very different political reasons, an accusation of "selling out" even though a settlement is virtually a fact already.

But there is also a considerable body of opinion which, drawing on past experience, sees the two sides as ultimately irreconcilable.

The next few days will show which of these two opposed views is right—although it seems clear that both the British team and the Rhodesians will do their

## Connally's currency warning

BY PAUL LEWIS, U.S. EDITOR

THE U.S. Treasury Secretary, Mr. John Connally, returned here over the week-end from his talks with the Japanese Government on the economic crisis to issue a blunt warning that the present period of floating exchange rates was not hurting America and could continue "for an almost indefinite period."

At an airport briefing, he said that, while the Japanese wanted an early end to the uncertainty caused by President Nixon's August programme, and the discussions in Tokyo had been conducted "with understanding and mutual sympathy," neither side had sought or offered any specific agreement.

In the meantime, he saw no danger of the U.S. import surcharge sparking off an international trade war ("In periods of uncertainty, you get all kinds of predictions," the Treasury Secretary said). The domestic economy had made a promising start on its recovery course, and there was, therefore, no reason why the world currency float should not continue indefinitely.

view, the highlight of the week undoubtedly will be the Treasury Secretary's address to the New York Economists Club on Tuesday evening.

It offers a chance to provide an up-to-date statement of administration's thinking on the American import surcharge and world monetary reform, following the negotiations with Japan and other trading partners and its decision to postpone the next ministerial meeting of the Group of Ten until after the summit talks between President Pompidou of France and the West German Chancellor.

In domestic terms, the next few days will be of particular importance since they not only mark the opening of Phase Two of President Nixon's economic stabilisation programme, but they should also reveal how far organised labour is prepared to co-operate with the administration's incomes policy. The new controls on wages and prices officially came into force at mid-night on Saturday with the ending of the 90-day freeze, and on Wednesday the AFL-CIO (the American equivalent of the TUC) will be meeting in Miami to review its grievances over them.

Both the domestic and foreign aspects of the President's new economic policy will come together at the international trade conference that opens in New York to-morrow and also in Wall Street's behaviour next week after its recent substantial fall. The conference may show how far the foreign trading community shares Mr. Connally's sanguine attitude to floating exchange

rates and the risk of retaliatory trade measures, while the stock market will have to decide whether the remaining uncertainties at home and abroad continue to outweigh the case for a correction.



Mr. John Connally

carefully prepared, and there have been some signs of late market will have to decide whether the remaining uncertainties at home and abroad continue to outweigh the case for a correction.

### Parities

The American attitude towards the Europeans also points in this direction. For, while Mr. Connally's decision to postpone this month's ministerial confrontation in Rome shows he is more worried than he admits about the effect of continued disagreement on business confidence, it was primarily intended to give Chancellor Brandt and President Pompidou another chance to sink their differences and reach a common position.

However, even if the two leaders can agree on a new fixed parity between the franc and the mark, and the French government softens its hostility towards any appreciation of its currency, there is no sign that the Europeans and Japan as a group will drop their demand that the U.S. participates in a realignment by devaluing the dollar itself.

For this reason, there is growing pressure on the U.S. Treasury at least to announce its willingness to fix a lower parity for the dollar in terms of the IMF Special Drawing Right, which it wishes to replace gold as the basis of the monetary system.

## Close strike majority at Coventry

BY PETER CARTWRIGHT, MIDLANDS CORRESPONDENT

IF ENGINEERING union leaders to-morrow back their Coventry District Committee's decision to begin an all-out strike next Monday it will be against the wishes of the majority of those at most of the 37 factories involved.

This is quite clear from the results of the balloting—a straight for or against an all-out strike—which I was able to obtain at the week-end.

The slender majority for strike

Ferguson voted against, as did a majority of the smaller federated firms.

A factory-by-factory breakdown of the voting will be put in front of members of the engineering union's executive to-day by Mr. Jim Griffin, president and shop stewards' convenor at Triumph, and Mr. Andy Boyle, secretary of the district committee.

They will also make personal reports on the dispute, which is over the termination by Coventry Engineering Employers' Association of the 30-year-old agreement that tied the rates of toolroom workers to the average for highly paid skilled production workers.



Mr. Hugh Scanlon  
AEUW president, faced with the situation of Coventry and also a national wage claim—see back page.

### Rules snag

The association wants to replace it by individual plant haggling. This has led to ten Monday strikes by more than 7,000 workers, counting to-day, costing more than £40m. in lost production. For four Tuesdays the employers have locked the men out in retaliation. There will be another lock-out to-morrow.

An official all-out strike at Coventry would quickly put about 50,000 workers out of jobs and cost the engineering union £50,000 a week at least in strike pay.

Although Coventry District Committee argues that a straight majority is in this instance sufficient to call a strike, union rules say there must be a 60 per cent. vote for a district strike.

The union executive must therefore decide whether the 54 per cent. for striking which the voting disclosed justifies, in view of the way it went at most factories, endorsing a strike next Monday.

Meanwhile the employers' association, which has been accused of being arrogant and truculent, said last night it was willing to meet the union again, at local or national level, at any time if there was a genuine intention to resolve the problem.

ing of 498 from the 6,304 votes cast (3,401 in favour—54 per cent.; 2,903 against) was achieved only because Rolls-Royce workers, already locked out indefinitely and having nothing to lose, voted heavily for striking—883 to 83.

The militant Triumph car plant and Renold Chain, where some workers have been laid off, voted overwhelmingly the same way, Triumph 268-60 and Renold 106 to one.

These three factories alone produced a 1,113 majority for striking. This means that at the other 34 plants, there was a majority of 615 against striking. All the non-federated firms, principally Automotive Products, Chrysler and Massey-

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## Cheap ICI way to clean car exhaust

BY DAVID FISHLICK, SCIENCE EDITOR

ICI chemists have discovered inexpensive catalysts they believe can clean up car exhausts to the rigorous standards demanded by the U.S. Government for 1976 models.

Until now, the major U.S. and European motor manufacturers have maintained publicly that these standards, at least in respect of nitrogen oxides, could not be met.

But British Leyland research engineers, who have been working closely with ICI in recent months, support the ICI claim. "Certainly we're very optimistic," said one at the week-end.

The discovery, if verified by durability trials in vehicles over the next few months, could open up a new market worth many millions of pounds annually for British catalysts. Even a small European car would need about 45 pounds, and the bigger and cooler U.S. engines appreciably more.

The world market for cars is just over 20m. a year. U.S. car makers, with about half this pro-

duction, have already given the system a most enthusiastic welcome this autumn, claims ICI.

Estimates

One U.S. estimate is that a catalytic clean-up might now be installed for as little as \$100, compared with \$200-\$300 for the cheapest alternatives in sight.

How much the catalyst will cost depends to a large extent on the economics of manufacture on a scale much greater than anyone has attempted before. It would certainly involve ICI in an investment of several million pounds. But preliminary estimates suggest that the catalyst will cost about \$2.3 per pound in manufacture.

The discovery was made in the laboratories of ICI's agricultural division on Teesside, which has a research team of about 100 working on catalysis, and particularly on reactions involving nitrogen compounds.

For the past 18 months, this team has collaborated with the British Leyland's atmospheric pollution control laboratory in forbidden.

Coventry, in engineering catalytic emission control systems.

The primary goal has been to meet U.S. Federal regulations expected to come into force in 1975-76, which are extremely severe.

They demand a 97 per cent. reduction in carbon monoxide emitted, a 98 per cent. reduction in hydrocarbons, and a 90 per cent. reduction in oxides of nitrogen, compared with the untreated exhausts. Eliminating the highly toxic oxides of nitrogen was generally regarded as the most difficult demand to meet.

Each of the companies has designed a two-catalyst system, "comparatively small and simple," to quote a British Leyland engineer, which in low-mileage trials on the Morris Marina fulfils all these demands. These are straight-through systems, requiring no recycling of the exhaust, and no controls. Lead "poisons" the catalysts, but it is assumed that by the time the system is required, petrola containing lead will be forbidden.

British Leyland is about to begin the crucial durability tests on both systems, again using Marina's. They call for a 50,000 miles' life test, with emission assays every 4,000 miles. At roughly 4,000 miles a week, these tests will take at least three months to complete.

### Misfires

They will reveal how, for example, the catalysts are affected by engine malfunction, such as partial misfires, which could deposit unburnt fuel on the catalyst and cause it to over-heat.

Millions of dollars have already been spent in the U.S. in the search for catalytic emission control systems.

ICI, which is one of the world's biggest suppliers of catalysts to the chemical process industries—it already exports catalysts worth several million pounds annually—has applied for patents on the new catalysts and on its own emission control system. The company remains free to licence these developments world-wide.



## Letters to the Editor

BRACKEN HOUSE, CANNON STREET, LONDON, EC4

## N. Ireland

Sir—I write with respect to the "reunited" article about the November 3. It was based, it seems to me, on the same fallacy as British policy towards Ireland between 1886 and 1914. The fallacy is that Ireland is one nation, wholly united, and destined to be reunited. The fact of the matter, however, is that Ireland is two nations, different socially, culturally, territorially, psychologically and politically. (Before the Anglo-Irish Free Trade Agreement of 1922, we could also have said "economically".)

The problem is that the Catholic nationalists have always claimed to rule the Protestant nation. "The minority has no right to opt out" is the cry, manifested in De Valera's 32 County Constitution and the present IRA campaign. This attitude denies self-determination (an elementary right) to the Protestants.

The Protestants resist this, and when the British Government acceded to the Catholic claim as they did in the 1886-1914 period, the Protestants opposed them as well (the Curragh Mutiny, the UVF) and succeeded in changing British policy by the threat of force.

If British policy were to revert to "united Irelandism" there would be the same opposition. This time, perhaps the guns might be used.

A lasting solution must be based not on a compromise with the undemocratic claims of the Catholic nationalists, but on a change of attitude in Dublin. In short, the South must recognise the North.

This would constitute a radical shake-up of Catholic politics, which is largely based on degrees of nationalism. Faint as the hope is, it is the only solution.

D. R. Stead,  
138, Lordship Road, N.16.

## Deliberate fomentation

Sir—With complete disregard for relevance, the cry, "South Africa," goes up immediately one ventures to criticise the antagonists, however violent, of an establishment. Perhaps Mr. T. C. O'Herrily (Nov. 10) has not heard that the Government of South Africa represents a white minority which is the exact opposite of the situation in Ulster. Of course, one does not have to live in a country to be able to comment and, although I have visited Ireland, North and

South, many times, I have never lived there and yet I comment. One simply has to be more careful in making one's judgments. That discontent exists in Ulster and is caused by discrimination is not really in dispute. Discrimination exists within most communities, but how much of that in Ulster is not, perhaps, induced by the very intrusiveness of the minority population? But let us not mistake the cause for the effect. Contrary to Mr. O'Herrily's assertion, the trouble in Ulster is basically associated with union with the South and is deliberately fomented by gangs of criminals who coerce and take by a majority of the population, though also interesting to have Mr. O'Herrily's views on the Spanish and Portuguese African colonies.

"By their acts shall ye know them," and God forbid that the people of Ulster should ever be handed over to a country so devoid of moral principles as to aid and abet bootleggers of the IRA kind, who murder indiscriminately and perpetrate such brutalities as the tarring and feathering of teenage girls. Not only is the freedom of the people of Ulster to live in peace being denied them, but their very freedom to live.

A. H. R. Deleas,  
Windrush, Manor Road,  
Henley-on-Thames.

## Vision for the future

Sir—If T. C. O'Herrily knows of authentic cases of discrimination against Catholics in N. Ireland since the passing of recent legislation, he should let your readers, and particularly Mr. Faulkner, have the facts. These cases could then be dealt with under the Acts in a democratic manner.

The British Army is at present

engaged in suppressing terrorism, and anyone threatening to use a weapon irrespective of religion, age or sex is liable to be shot. Internment is likewise non-discriminatory. On the point of history the "natives" of Ulster are the descendants of the ancient Irish, known as "Scots," who raided the coasts of Britain and occupied Argyll and other parts, returning later to their native land, and being erroneously known as "Scots." In one of their forays against Britain they captured a lad who later as a slave tended sheep on the slopes of Slemish in Co. Antrim. This lad later escaped to Britain, became a hushpenny named St. Patrick, returning to Ireland in 432 AD to spread Christianity. St. Patrick was a Christian, neither a Roman Catholic nor a Presbyterian.

Herein lies hope for the future of Ireland. It is in the re-dedication of all people in Ireland to the principles under which St. Patrick, leaving individuals free to worship according to their creeds, but all owing allegiance to Christianity as taught by Ireland's long-accepted Patron Saint.

We should not "forget the past" as is often suggested, but rather "remember the past," for Ireland has a heritage of learning, and a culture of great antiquity, and much to be proud of in her contribution to Civilisation.

And above all else politicians must never be allowed to stand for election under religious banners, for the Christianity of St. Patrick is indivisible.

And what is the vision for the future?

It is of a land of wondrous beauty, whose people are kindly, hospitable, and endowed with a deep sense of Christian morality, preferring Christianity and Peace to Paganism and War; a land conscious of the social and economic advantages of close ties with Britain, as indeed all thinking people in Ireland recognise today; a land drawing pilgrims and holidaymakers from all over the world to witness the ruins and ancient monuments, and to enjoy just being back in Ireland.

George H. Adams,  
Arden,  
Loudhams Wood Lane,  
Chalfont St. Giles.

## Medical examinations

Sir—For many years past I have been uneasy in my mind concerning the medical examination requirements of large com-

panies and similar organisations. The recent case of Asa Hartford the West Bromwich footballer has done nothing to allay my fears.

I know we can argue the rights and wrongs of this thing until the cows come home, but basically there is no argument against the rights of the individual not to have his most private and intimate concerns made public. Asa Hartford is a particular example of what might happen when the system goes wrong, the very livelihood of a man can be taken away from him. This is going far and away beyond any reasonable requirements of an employer.

In this computer age we suffer too much from nosy parking. I feel that many quarters should be prepared to take the risk. There are other values in life besides money.

A. R. Paske,  
Chairman, Regal Packaging,  
Kentford, Newmarket.

## Steel price increase

Sir—Your report (November 10 page one) that the British Steel Corporation will seek a 5.10 per cent. price increase next April refers to last April's increase which the Government reduced to 7 per cent. in place of the 14 per cent. which the BSC had sought.

The substantial part of the private sector in the steel industry which is concerned with the production of alloy and special steels suffered grievously last April from the way in which the BSC saw fit to apply to its various products the general 7 per cent. award.

In more common and carbon steels the BSC enjoys a near monopoly position whereas in alloy and special steels its production is less preponderant. To these two main categories the Corporation last April applied substantially different increases, awarding to itself 10.11 per cent. on the more common steels and approximately 31 per cent. on the general run of alloy steels where it has to meet a good measure of competition from U.K. makers.

It will be appreciated that, whatever the legal position, it is essential for private sector steel-makers to accept the price leadership of the Corporation in the barge market for the general run of products. The effect of decisions on pricing made by the

BSC in its vastly powerful and, in some products, near monopoly position is therefore of the most vital consequence to the independent makers. The Corporation's ability to manipulate prices to its own advantage may well be represented as no more than sensible commercial prudence. Nevertheless the sheer power to affect the fortunes of the rest of the industry by such manipulation is a matter for grave concern.

It is to be hoped that the Government appreciates the full implications of the possession of this particular power and that it is alive to some of the consequences if it is in any degree relaxed.

The private sector awaits with uncommon interest the lead which will be given by the Corporation whenever the next increases are applied and my own company looks to those concerned with the application of any increases for fair and honourable treatment.

Tom Kilpatrick, Chief Executive,  
Brown Bayley Steels,  
Leeds Road, Sheffield.

## Planning for mechanisation

Sir—Addressing The Institute of Materials Handling on November 1, Mr. Roberts, the Director of Operations of The Post Office, described, *inter alia*, how highly labour-intensive was his operation and how mechanisation would result in the curtailment of public freedom. "Zip-codes" would be necessary, envelopes must be standard, firm addresses would be possible and prices would rise. However, neither he nor Mr. Ryland, when on television the following day, drew attention to the two most important aspects of the change.

First, mechanisation should be to enable human lives to be more enjoyable and not merely a gimmick to enable paper profits to be created, and second, that a major employer of labour, any reductions will create further unemployment thus causing higher taxes from which to pay the benefits. These latter may well offset the lower prices paid by the individual.

Workers in contact with the public achieve more job satisfaction than those who operate machinery because they are required to use their brains and because they develop pleasant

social contacts with the customers. This is why they are normally prepared to accept lower pay than those who demand high rates to offset the boredom created by working on soulless repetitive work.

The time may well have arrived when society should look to creating an environment which is free and happy and rewarding rather than soulless, restricted, and even very profitable in pure accountancy terms. The reason why God is largely ignored by so many people today is that we have the wrong God—money is a pretty useless God! Personal freedom, peace of mind and happiness are the individual would be a better one.

If we are to plan for mechanisation, restrictions and high profits, we must also plan for permanent high unemployment or very short working weeks. These will demand that the public be "educated" so that they can enjoy their freedom without frustration (not merely technically trained) and the result may be that the educated enjoy life on National Assistance while the technically trained but uneducated populace do the work within the rat-race of commerce. This, rather than excuses for higher prices, is the real question for the electorate to settle.

Bruce Gillett,  
Garrick Lodge, Lillingdon,  
Polegate, Sussex.

## Managers' and workers' pay

Sir—I was surprised to read the conclusions AIC drew from the narrowing gap between managers' and workers' pay levels, as reported in Elsie Gwynne's article on November 5, page 5.

A flatter system based on a more egalitarian philosophy is an interesting idea. But surely the hard facts are that one body is "organised" and can exercise sanctions to back its negotiations and therefore obtains for itself a larger slice of the cake, than the other body, which negotiates individually, if at all, and hence, generally less effectively.

If this hypothesis is correct, what implications are there for the future? Perhaps the lower-paid managers, followed by the not-so-low-paid, and so on, will be moved to take corrective action by becoming "organised" themselves. UKAPs, ASTMS and others are no doubt well aware of this possibility, but are senior

management? They too, should be alive to the implications and take action now to ensure that they exercise control over the changing situation.

Roger Usherwood,  
15, Peacock Road,  
King's Heath,  
Birmingham.

## Direct tax on spending

Sir—Your correspondent, Mr. S.W. Penwill (November 3) writing about the simplification of tax, makes certain suggestions about this, but seems to reject the idea of a tax on spending as this would have a heavy on the poor.

This would be so if the tax were levied indirectly, as is the case with income tax. Why should there not be a direct tax on spending as there is now a tax on income?

Ignoring any assets, for the moment, the tax could be levied on the difference between income received during the course of a year and the amount remaining unspent.

Assets held at the beginning of and throughout the year would not have any effect on the tax. Assets received during the year and held to the end would also have no effect. Money received for assets disposed of during a particular year would be treated as income. If new assets were acquired, the amount paid for these would be set against the money acquired for assets sold.

The effect of all this would be a tax on net annual spending. There could be allowances for certain items in the system of income tax, to be set against tax liabilities. The rate of tax could be varied, as in income tax. Exceptional spending would result in an exceptionally high rate of tax.

An exceptionally low rate of spending would result in an exceptionally low rate of tax or total exemption.

The fact that it was a tax on spending would encourage thrift—though this, to-day, seems to be a dirty word in some quarters. Other taxes, such as capital gains tax could be dispensed with. Indirect taxation need only be used as a means of discouraging excessive purchases of items such as drink and tobacco. If this were considered advisable, rather than as a means of raising income.

Much of the present administration involved in purchase tax, and other indirect tax collection could be dispensed with. I do not

see how a spending tax would be any more complicated to administer than the present income tax plus capital gains tax. It would have the merit of allowing the taxpayer to decide whether or not he would pay it, by increasing or decreasing his spending. It would also place the burden of taxation where it should be placed—on those who make demands on the nation's resources.

W. F. Richardson,  
24, Queen's Drive,  
Fulwood, Preston.

## Guiltless of pollution

Sir—Mr. Walker (November 11) presumably finds taxis and lorries "worse" about pollution because he can see the filthy smoke they emit more clearly. It is, however, questionable whether visible smoke is more harmful than invisible fumes. There is only one form of road transport which is completely guiltless of the pollution charge—the bicycle.

I have been riding a bicycle in Central London for the last three months, and would commend it to you for the following reasons: 1. It is a five-mile radius of Piccadilly Circus, it is faster than any other form of transport. This exhilaration of bicycling past a mile of stationary cars at 5.00 p.m. is considerable.

2. It is the only way I can get to work. 3. I save approximately £100 a week on parking, apart from initial capital outlay, my overheads in three months have been £30 (one inner tube).

4. It is, despite the pollution, far healthier, and thus an answer to the desk-bound executive who cannot afford the time to take any exercise.

If only more people would overcome their natural laziness and try it once, they would be amazed at the advantages of a bicycle has over all other forms of transport in Central London. They would then perhaps be more willing to campaign for better parking facilities (especially at main line stations) and for greater courtesy to motorists, who often fail to be enough space on their left for the bicycle. I hope the GLC's inquiry will not overlook the potential of the bicycle in helping to solve the problem of congestion.

Bryan Stevens,  
6, Mortimer Crescent, N.W.6.

## ART GALLERIES

AGNEW GALLERY, 45, Old Bond St., W.1. 629 6176. OLD MASTERS. Recent acquisitions. Until 10th December. Mon-Fri. 9.30-5.30. Thur. until 7.0. Catalogues sold in aid of The Titan Fund.

KAPLAN GALLERY, 10, Pall Mall. 5.5. AUTUMN EXHIBITION of French Impressionist Paintings. Daily 10-6. Sat. 10-1.

LEONARD KOTLER GALLERY, 13, Duke St. 5.5. JAMES'S 91-93D 8344. Autumn Exhibition of Fine Old Master Paintings. 10th October-30th November. Daily 10-6. Sat. 10-1.

MARLBOROUGH FINE ART, 6, Albemarle St. W.1. 7559 771. Opening Nov. 25th. Daily 10-5.30. Saturdays 10-1.30.

MARLBOROUGH GALLERY LTD., 17-19 Old Bond St. W.1. ALLEN JONES. Watercolours, Drawings. Graphics. Daily 10-5.30. Sat. 10-1.30.

ROLAND BROWNE & SLEBANE, 19, Cork Street, W.1. PAUL KLEE. 10-12.5. Sat. 10-1.00. Closing November 20th.

## Events

**To-day**

**PARLIAMENTARY BUSINESS**—House of Commons: Second reading, Housing Finance Bill. LORD MAYOR'S BANQUET, speakers include the Prime Minister and the Lord Chancellor, at the Guildhall, 7 p.m.

A list of Today's Company Meetings can be found in the Week's Financial Diary on Page 4.

**WALL'S CUTS SOME BACON PRICES**

Reductions of 1p in the price of some packs of vacuum packed bacon are announced by T. Wall's and Sons (Gloucester) Handy Foods. Wall's 7's or Middle Cut and 12's or Family Pack—available in the North of England and Scotland—are reduced to 18p and 26p respectively, and the 7's or Family Cut, available in London and the South of England, to 17p.

## TV Radio

\* Indicates programme in black and white

**BBC 1**

9.30 a.m. For Schools, Colleges.

12.00 p.m. Hardy Heating Co. Ltd. 12.55 A Chance to Meet—Encounter Sir Bernard Fergusson, 1.00 Wooden Puppets. Watch With Mother. 1.45 News. 2.05 For Schools, Colleges. 4.10 Prospectus: Teaching of General Studies, part 1. 4.35 Adventures of Farley. 4.40 Jackanory. 4.55 Blue Peter. 5.20 The Runaway Summer, part 2. 5.44 Magic Roundabout.

5.50 News.

6.00 London This Week.

6.20 Entertaining with Kerr.

6.45 Ask the Family.

7.05 2 Cars.

7.30 Now Take my Wife... starring Sheila Hancock. Donald Houston and Liz Edmonstone.

8.00 Panorama.

9.00 Nine O'Clock News.

9.20 The Troubadours.

10.10 Stapote and Son.

10.40 24 Hours including coverage of the speech by the Prime Minister at the Lord Mayor's Banquet.

\* 11.25 Road Sense, part 6.

All Regions as BBC 1 except at the following times:—

Wales—6.00-6.15 p.m. Ar Lin Main. 6.00-6.15 p.m. Wales Today. 6.45-7.05 Reddifo. \*7.30-8.00 Margaret: Margaret Williams and guests.

Scotland—6.00-6.20 p.m. Reporting Scotland. 10.10-10.40 Castles in the Air. Hopetoun House. 11.25-11.45 What are the Scots? \*11.55 Scottish News Headlines.

Northern Ireland—6.00-6.20 p.m. Scene Around Six. \*11.32 Northern Ireland News Headlines.

England—6.00-6.20 p.m. Look North. (from Leeds, Manchester, Newcastle). 11.45-11.55 What's New? (from Birmingham): Look East (from Norwich); Points West (from Bristol): South To-day (from Southampton): Spotlight South West (from Plymouth): 11.52 Regional News Headlines.

**BBC 2**

11.00 a.m. Play School.

\* 1.10 p.m. Dressmaking: part 7.

7.40 News.

8.00 Atlas Smith and Jones.

8.50 Call My Bluff.

9.20 Horizon.

10.10 Thirty-Minute Theatre.

10.40 News at 2.

10.45 Late Night Line-Up.

**LONDON**

10.30 a.m. and 1.40 p.m. Schools.

2.35 This Week. "100 Country Visit." 10.10 All About Riding. 1.10 The Adventures of Rupert Bear. 3.55 Peyton Place. 4.25 Tea Break. 4.55 Lost in Space. 5.50 News from ITN. 6.00 Today.

6.20 Crossroads.

6.40 Opportunity Knocks! 6.50 News. 7.00 Coronation Street. 7.30 World in Action. 8.30 Lollipop Loves Mr. Mole. 9.00 The Tenth of Sherlock Holmes.

10.00 News Review.

10.30 The X Film: "The Skull." Starring Peter Christopher, Patrick Wymark and Christopher Lee.

12.05 a.m. Grass Roots. 1.30 Peter Taylor talks to Ron Bailey of the London Squatters.

All ITV Regions as London except at the following times:—

\* 3.55 a.m. Kate Stewart Cooks. 4.20 Cartoon Line. 4.25 Anglia News. 4.30 News. 4.35 Flippers. 4.40 News. 4.45 News. 4.50 News. 4.55 News. 5.00 News. 5.05 News. 5.10 News. 5.15 News. 5.20 News. 5.25 News. 5.30 News. 5.35 News. 5.40 News. 5.45 News. 5.50 News. 5.55 News. 6.00 News. 6.05 News. 6.10 News. 6.15 News. 6.20 News. 6.25 News. 6.30 News. 6.35 News. 6.40 News. 6.45 News. 6.50 News. 6.55 News. 7.00 News. 7.05 News. 7.10 News. 7.15 News. 7.20 News. 7.25 News. 7.30 News. 7.35 News. 7.40 News. 7.45 News. 7.50 News. 7.55 News. 8.00 News. 8.05 News. 8.10 News. 8.15 News. 8.20 News. 8.25 News. 8.30 News. 8.35 News. 8.40 News. 8.45 News. 8.50 News. 8.55 News. 9.00 News. 9.05 News. 9.10 News. 9.15 News. 9.20 News. 9.25 News. 9.30 News. 9.35 News. 9.40 News. 9.45 News. 9.50 News. 9.55 News. 10.00 News. 10.05 News. 10.10 News. 10.15 News. 10.20 News. 10.25 News. 10.30 News. 10.35 News. 10.40 News. 10.45 News. 10.50 News. 10.55 News. 11.00 News. 11.05 News. 11.10 News. 11.15 News. 11.20 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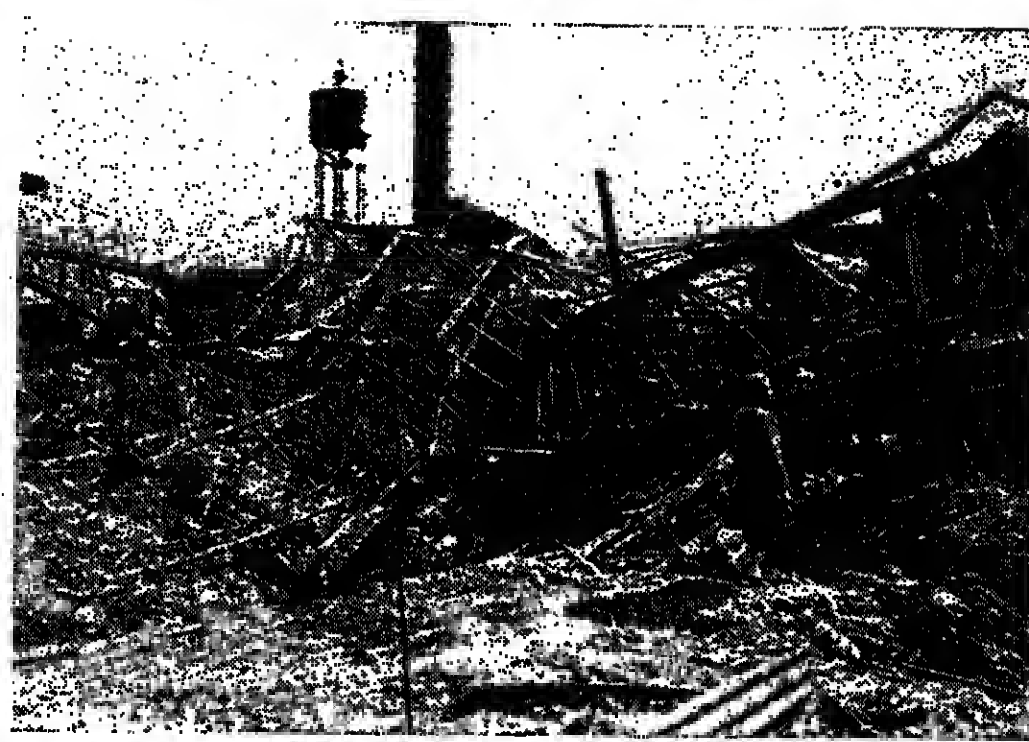
# By 1945, Germany had won a huge industrial advantage.



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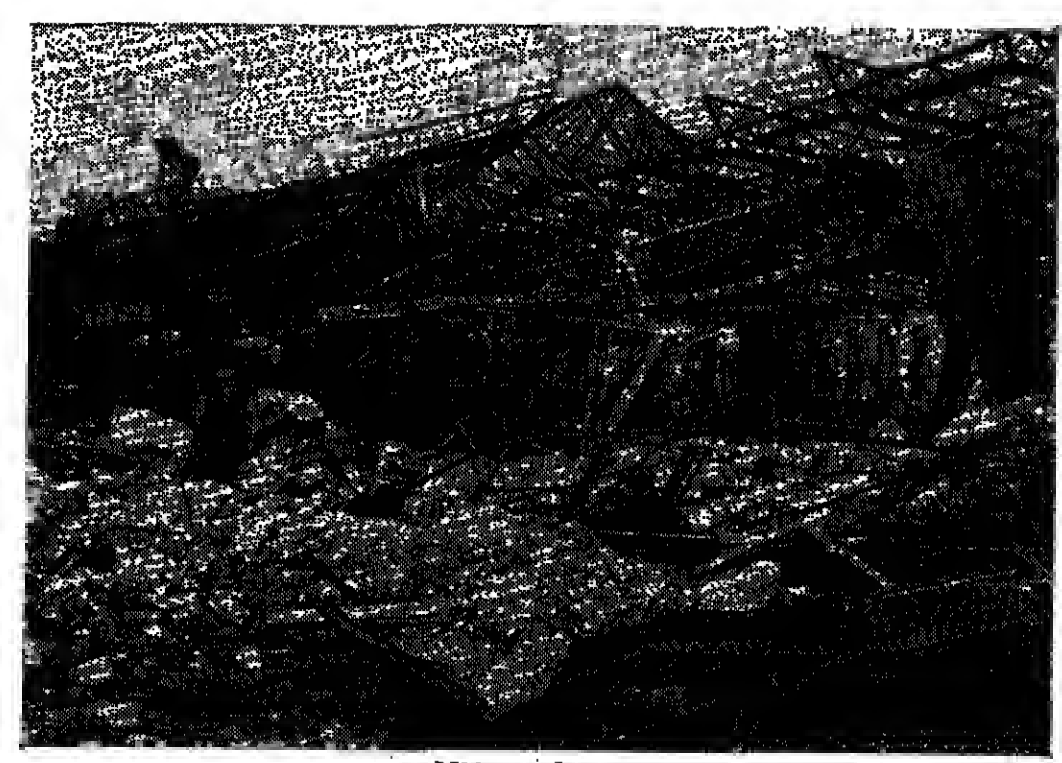
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Bochum



Fallersleben

Wartime bombing destroyed the German economy. It also left the basis of Germany's post-war recovery. For the bombs destroyed traditional attitudes as well as factories. And when rebuilding started, efficiency rather than precedent governed every management decision. In Britain, management saw no such need to change its ways. And to this day, precedent is still one of the biggest factors in management decisions. Take factory heating. Every time a new factory is built, management has to choose between two completely different heating systems. One, the warm air system, is modern, efficient and cheap. The other, the boiler system, is old-fashioned, clumsy, and twice as expensive to install. It is, however, hallowed by tradition. Which is why 75% of factories built in Britain this year will be heated by a boiler system. In contrast to Germany. Where, ever since the war, warm air heating has taken over

from boilers. What makes British management's complacency sad is that the British make the best warm air heating system in the world. It is made in Havant by Colt. A Colt warm air system comes with a foolproof 10 year guarantee. Every Colt system is regularly serviced by Colt engineers. And Colt's fleet of over 60 service vehicles attend to any emergency within 24 hours. Best of all, a complete Colt warm air system can now be leased. In a 100,000 sq. ft. factory, for example, a mere £1,000 will now see a Colt system installed and in operation. And £400 of that £1,000 will come straight back to you, in the shape of a 40% rebate on Corporation Tax. Our free survey will show you how little it would cost you. With the Common Market coming, the boiler system is not a tradition you can afford to keep up. Colt International Ltd. (Heating Ventilation & Industrial Access), Havant, Hants. Havant 6411. Telex: 86219.

London International The first class hotel just off the road to the BEA London terminal

Come see London International



A copy of this Advertisement, having attached thereto the documents specified herein, has been delivered to the Registrar of Companies for registration. This Advertisement is issued in compliance with the Regulations of the Council of the Northern Stock Exchange for the purposes of giving information to the public with regard to R. KELVIN WATSON LIMITED ("THE COMPANY"). The Directors collectively and individually accept full responsibility for the accuracy of the information given and confirm, having made all reasonable enquiries, that to the best of their knowledge and belief there are no other facts the omission of which would make any statement in the Advertisement misleading. Application has been made to the Council of the Northern Stock Exchange for permission to deal in and for quotation for the whole of the 1,000,000 issued Ordinary Shares of 10p each of the Company.

# R. KELVIN WATSON LIMITED

(Incorporated under the Companies Acts, 1948 to 1967)

## CONTACT LENS MANUFACTURERS AND OPTICIANS

**WATSON'S**  
Opticians

### SHARE CAPITAL

Authorised

£

100,000 in Ordinary Shares of 10p each

Issued and Fully Paid

£

100,000

Placing by

**David Q. Henriques & Co.**

of 350,000 Fully Paid Ordinary Shares of 10p each at 88p per Share

Exclusive of inter-company indebtedness, neither the Company nor any of its subsidiaries has outstanding any mortgages, charges, hire-purchase commitments, debentures, loan capital, bank overdrafts or other similar indebtedness, guarantees or material contingent liabilities.

#### DIRECTORS

RAYMOND KELVIN WATSON, F.B.O.A., H.D. (Chairman), Plas Haulog, Conway, Caernarvonshire.  
GEOFFREY KELVIN WATSON, F.B.O.A., Eilean Donan, 39 Roundcroft, Romiley, Cheshire.  
CHARLES ERIC BLOODWORTH, F.B.O.A., Gai Logis, Chester Road, Mera, Cheshire.  
JOHN GORDON LABREY, F.C.A., Delamere, 42 Offerton Road, Hazel Grove, Cheshire.  
HILDA WATSON, Plas Haulog, Conway, Caernarvonshire.

#### BANKERS

NATIONAL WESTMINSTER BANK LIMITED, Loyd Entwistle Office, 35 King Street, Manchester M60 2NP.

#### SOLICITORS

To the Company:

GEORGE DAVIES & CO., 81 Fountain Street, Manchester M2 2FB.

To the Placing:  
JOHN TAYLOR & CO., Royal Insurance Building, 2 Barton Square, Manchester M2 7LR.

#### BROKERS

DAVID Q. HENRIQUES & CO., Barnett House, Fountain Street, Manchester M2 2AS and the Northern Stock Exchange

#### AUDITORS, REGISTRARS AND TRANSFER OFFICE

SPICER AND PEGLER, Chartered Accountants, Derby House, 12-16 Booth Street, Manchester M60 2ED.

#### REPORTING ACCOUNTANTS

THORNTON BAKER & CO., Chartered Accountants, Brazennose House, Brazennose Street, Manchester M2 5AX.

#### SECRETARY AND REGISTERED OFFICE

JOHN GORDON LABREY, F.C.A., Kelvin House, Manchester Road, Denton, Manchester M34 2AH.

#### INCORPORATION

R. Kelvin Watson Limited ("the Company") was incorporated in England as a private company on the 9th of July, 1968 to acquire the issued share capital of Kelvin Watson Limited ("Kelvin"), Watson's Opticians Limited ("Watsons"), W. Gordon (Llandudno) Limited ("Gordon"), and Geekay Optical Co. Limited ("Geekay"), and the Company was converted into a public company on the 5th of November, 1971. It acts as the holding company for its four subsidiaries named above, and owns beneficially all the share capital of each of them. The expression "the Group" herein means the Company, Watsons, Kelvin and Geekay with effect from their respective dates of incorporation, and Gordon with effect from its acquisition in 1967.

Watsons was incorporated under the name "Watsons, The Opticians, Limited" on the 23rd of January, 1941 to acquire the undertaking and assets of the business of ophthalmic opticians called "Watsons the Opticians" which was commenced by the present Chairman in 1932. It adopted its present name on the 21st of July, 1962.

Kelvin was incorporated on the 30th of May, 1947 as contact lens manufacturers, suppliers and fitters, following the development by the present Chairman of a unique method of manufacturing contact lenses by pressing rather than by grinding.

Geekay was incorporated on the 3rd of July, 1968 to take over a business called "Geekay Optical Co." This had been commenced by Geoffrey Kelvin Watson on the 1st of January, 1965 to take over the spectacles manufacturing section of Kelvin.

Gordon was incorporated on the 14th of April, 1956 and all its shares were acquired by Raymond Kelvin Watson, Hilda Watson and Geoffrey Watson for cash on 1st of January, 1967, its business is similar to that of Watsons.

**BUSINESS**

Kelvin manufactures and supplies contact lenses to opticians, hospitals and ophthalmologists in the United Kingdom and overseas. In addition, it provides a nationwide service to the optical profession whereby its staff of specialist practitioners (based in Manchester, London, Edinburgh, Cheltenham, and Wakefield) visit opticians and fit contact lenses on their behalf in the opticians' own premises. It also supplies cleaning and wetting solutions under its own brand names for use with contact lenses, and offers facilities for the replacement of lost or damaged contact lenses in return for an annual fee. Watsons and Gordon operate as ophthalmic opticians in eleven branches in the North-West. Geekay manufactures spectacles to prescription for the practices of Watsons and Gordon and for other opticians.

#### MANAGEMENT AND STAFF

Raymond Kelvin Watson (aged 61) has been actively engaged in the business of the Group since its commencement in 1932. He has been Chairman and Chief Executive of the Company since its formation in 1968. His wife, Hilda Watson, has been associated with the business since 1935 and was secretary of Watsons and Kelvin for a number of years. As a non-executive Director of the Company, she continues to take an active interest in Group affairs. Their son, Geoffrey Watson (aged 34), joined Watsons in 1963 and has been its Managing Director for the last four years. Eric Bloodworth (aged 40) joined Kelvin in 1955 and has been its Managing Director for the last six years. Gordon Labrey (aged 36) joined Kelvin in 1965 as Accountant and Office Manager. He was appointed Secretary of Kelvin in 1966, of Watsons in 1967, and of the Company in 1968. In addition, each of the subsidiaries is served by an experienced management team.

A great deal of the success of the Group has been due to close liaison between the staff at all levels and the operation of a profit sharing scheme. Turnover of staff is small and labour relations are excellent. The total number of employees in the Group is 168.

#### PREMISES

The Group's Freehold and Long Leasehold Premises, which were valued by Suttons, Chartered Surveyors and Valuers of Manchester as at September 1971 on a market value basis, with vacant possession at an aggregate of £54,350 are set out below:—

Premises	Site area (sq. yds.)	Floor area (sq. ft.)	Tenure	Occupier
Head Office and Works, Kelvin House, Manchester Road, Denton, Manchester	1,062	7,000	Freehold	Kelvin Watsons
Shop, 28 Warner Street, Accrington Lancs.	86	684	Leasehold 999 years from 1927, Ground Rent 71p per annum Fully sublet on short terms at an aggregate net receivable rate of £831.50 p.a.	—
2 long leasehold shops at Hyde, Cheshire (terms not less than 750 years)	—	1,537	—	—

#### In Addition:—

(a) Kelvin occupies 4 leasehold shops and/or offices at Kingston-on-Thames, Edinburgh, Cheltenham and Wakefield for various terms of not less than 3 years and not exceeding 19 years to run, at aggregate current rents of £1,790 p.a.

(b) Watsons and Gordon occupy 9 leasehold shops and/or offices in the North-West for various terms of not less than 4 years and not exceeding 20 years to run, at aggregate current rents of £6,318 p.a. and Watsons is negotiating the renewal of a lease for a tenth shop.

#### PLANT, MACHINERY, TOOLS AND EQUIPMENT

The Group's Plant, Machinery, Tools, and Equipment are maintained to the high precision standard necessary for its process of lens production. They include specialist machinery and tools of own design and manufacture which are not available to competitors.

#### MOTOR VEHICLES

The substantial fleet of vehicles necessary for the Group's country-wide service is modern and replacements are made at not more than 2 year intervals.

#### CANADIAN SUBSIDIARY

On the 31st of May, 1968 a wholly owned subsidiary, Kelvin Contact Lenses (Canada) Limited was incorporated in Canada to manufacture and supply contact lenses by Kelvin's method. The cost of breaking into the North American Market has proved to be higher than anticipated, and this company was sold to local Canadian interests in October, 1971. As will be seen from the Statement of Net Tangible Assets in the Accountants' Report, provision has been made for the losses and liabilities resulting from this venture and is adequate to avoid any further charge thereon having to be made against the future Assets or Profits of the Group.

#### RESEARCH

For almost two years the National Research Development Corporation has sponsored research at the University of Aston in Birmingham for the development of a material suitable for the manufacture of soft contact lenses and has applied for provisional patents thereon. Kelvin has agreed in principle with the University to contribute to that research for up to two and a half years and also to continue technical assistance rendered by Kelvin's staff. This contribution will not exceed £14,350 in the first twelve months of operation and it is anticipated that this rate of expenditure will not be exceeded during the remaining eighteen months of the agreement. Heads of Agreement are being negotiated for the grant to Kelvin by the National Research Development Corporation by December 1971 of an option to acquire an exclusive licence for the manufacture and supply of the material for contact lenses in the United Kingdom and a share in licences granted overseas. The Directors are of the opinion that the potential benefits therefrom should be considerable.

#### PROFITS, PROSPECTS AND DIVIDENDS

As will be seen from the figures set out in the Accountants' Report below, Sales and Profits have increased steadily over the past ten years. All subsidiaries have shared in the increase and the major contribution has been from Kelvin. Although the Group is not immune from competition, it is the leading manufacturer of contact lenses in the United Kingdom. Its method of manufacture and its research projects place it in a strong position to withstand competition.

Turnover and Profits of the Group on the basis of unaudited figures for the first six months of the current year show an increase over the corresponding figures for the year ended 31st of March, 1971. The Directors are of the opinion that, in the absence of unforeseen circumstances, profits of the Group before taxation for the year ending 31st of March, 1972 should not be less than £140,000. Assuming that the research arrangements referred to previously with the University of Aston in Birmingham are concluded successfully, the charge against such profits for this research will be approximately £5,000 for the period to 31st March, 1972 and £14,350 in full year.

On this basis, the Board expect to recommend a dividend for the year ending 31st of March, 1972 of 25p per share payable in August 1972. In a full financial year as a public company, the Board would expect to recommend dividends totalling 5p per share with an interim dividend in February, and a final dividend payable in the following August.

#### WORKING CAPITAL

The Group has not had recourse to bankers or other borrowing to finance its expansion in the United Kingdom during past years and the Directors are of the opinion that, having regard to existing bank facilities for recourse if need be, the Group has adequate working capital for its presently foreseen requirements.

#### DIVIDEND COVER, YIELD AND PRICE/EARNINGS RATIO

On the basis of profits before taxation, estimated as above, an Ordinary dividend of 5p per share would be covered as shown below:—

Estimated profits (for the year ending 31st March, 1972)	£ 140,000
Less University of Aston Research (to 31st March, 1972)	6,000
	134,000
Less Corporation Tax at 40 per cent.	53,600
	80,400
Ordinary Dividend of 5p per share	50,000
Retained in the Business	30,400
Dividend Cover	1.6 times
At the placing price of 88p per share the gross dividend yield would be 5.68 per cent. with a price/earnings ratio of 10.95.	

#### ACCOUNTANTS' REPORT

The following is a copy of a joint report received from Spicer and Pegler, auditors of the Company and Thornton Baker & Co. Reporting Accountants—  
To the Directors of R. Kelvin Watson Limited and David Q. Henriques & Co.

Gentlemen,

We have examined the audited Accounts of R. Kelvin Watson Limited ("the Company") and its wholly owned United Kingdom subsidiaries (collectively referred to as "the Group") viz:—

	Period	Audited by
1. R. Kelvin Watson Limited	8th July 1968 to 31st March 1970	Morton & Barber, 5 Corporation Street, Hyde, Cheshire, Chartered Accountants
	1st April, 1970 to 31st March, 1971	Spicer and Pegler, Derby House, 12/16 Booth Street, Manchester, 2, Chartered Accountants
2. Kelvin Lenses Limited	1st April, 1961 to 31st March, 1970	Morton & Barber
	1st April, 1970 to 31st March, 1971	Spicer and Pegler
3. Watsons Opticians Limited (until 21st July, 1962 named Watsons The Opticians Limited)	1st April, 1961 to 31st March, 1970	Morton & Barber
	1st April, 1970 to 31st March, 1971	Spicer and Pegler
4. G. K. Watson trading as Geekay Optical Co. Ltd. (Incorporated 3rd July, 1968 to acquire Geekay Optical Co.)	1st April, 1968 to 31st March, 1971	Morton & Barber
	1st April, 1970 to 31st March, 1971	Spicer and Pegler
5. W. Gordon (Llandudno) Ltd.	1st January, 1967 to 31st March, 1968	A.A. Thomas, Evans & Co., 4 Trinity Square, Llandudno, Chartered Accountants
	1st April, 1968 to 31st March, 1970	Morton & Barber
	1st April, 1970 to 31st March, 1971	Spicer and Pegler

We have also examined the undermentioned financial statements of Kelvin Contact Lenses (Canada) Ltd., (a) Unaudited financial statements as submitted for Canadian taxation by Thomas, Gunn, Hewitt & Christensen, Royal Trust Tower, Box 292, Toronto—Dominion Centre, Toronto III, Canada, Chartered Accountants, for the periods 31st May, 1968 (date of incorporation) to 31st March, 1971.

(b) Audited financial statements for the period 1st April to 30th June, 1971. Geekay Optical Co. traded as the spectacles manufacturing section of the Group from 1st January, 1965 to 30th September, 1968 when its assets and liabilities were acquired by Geekay Optical Co. Limited.

#### PROFITS

The profits of the Group for the 10 years ended 31st March, 1971 on the basis set out below, were:—

Years ended 31st March	(1) Sales	(2) Profit before charging Depreciation and Amortisation	(3) Profit before charging Depreciation and Amortisation	(4) Profit before charging taxation
1962	77,249	8,905	2,048	6,858
1963	88,467	12,183	2,731	9,452
1964	100,098	17,713	3,251	14,462
1965	135,228	28,784	4,173	22,611
1966	170,700	33,427	4,755	28,672
1967	228,608	48,871	7,187	38,704
1968	275,498	63,806	8,054	54,751
1969	352,739	83,754	13,253	80,501
1970	471,398	119,854	16,538	103,316
1971	687,020	148,282	21,376	126,906

#### Notes

- The foregoing figures refer to the Company and its United Kingdom subsidiaries (i.e. the Group) and exclude Kelvin Contact Lenses (Canada) Ltd., sold to Canadian interests in October, 1971.
- Sales are net after returns and allowances and eliminating inter-company transactions.
- The profit set out in column (2) have been arrived at after charging all expenses of working and administration including Directors' emoluments and after making such adjustments as we consider appropriate but before charging the amounts set out in column (3) and the losses of Kelvin Contact Lenses (Canada) Ltd. as shown by the Unaudited Financial Statements, converted as to 1969 and 1970 to £2.58 to £ and as to 1971 to £2.43 to £, which total £28,000 over the three years.
- The Depreciation (column (3)) has been calculated on a basis which in our opinion are consistent and reasonable. No amortisation has been charged in respect of Freehold and Long Leasehold Premises.
- Complete records of physical stocktaking are available only from 31st March, 1967 and audit working papers are not available to support bases of stocktaking and valuation for earlier years. We are satisfied from those available records that stocks were taken on the relevant dates on the consistent basis of the lower of works cost and net realisable value, and for earlier dates for which complete stocktaking records are not available our enquiries and investigations into product profits have satisfied us that there was no material variation in the basis of stocktaking and valuation throughout the 10-year period.
- The aggregate emoluments of the present Directors of the Company for the year ended 31st March, 1971 amounted to £27,876. Under the arrangements now in force the emoluments of those Directors for the year ended 31st March, 1971 would have amounted to £31,828.

#### NET TANGIBLE ASSETS

The Net Tangible Assets of the Company and of the Group based on the audited Balance Sheets at 31st March, 1971, after making such adjustments as we consider appropriate were:—

	THE COMPANY	THE GROUP
£	£	£
FIXED ASSETS		
Freehold and Long Leasehold Premises (Professional open market valuation as at September, 1971, £54,350)	—	48,699
Short Leasehold Premises and Improvements thereon (Note 1)	8,157	1,337
Plant, Machinery, Tools, Equipment, Furniture and Fixtures	91,593	85,482
Motor Vehicles	92,813	6,853
	182,563	152,371
Opticians' Practices and Patients' Records (Note 2)	40,336	40,336
INTERESTS IN SUBSIDIARIES (excluding Kelvin Contact Lenses (Canada) Ltd.)—		
Shares in Subsidiaries at Cost	115,200	—
Amounts owed by Subsidiaries	98,765	—
CURRENT ASSETS		
Stock and Work in Progress at the lower of works cost and net realisable value	45,584	—
Debtors	137,862	—
Cash and Bank Balances	52,844	—
	236,290	236,290
Less: CURRENT LIABILITIES		
Creditors, including net liabilities arising from the reallocation of Kelvin Contact Lenses (Canada) Ltd. (Note 3)	53,850	—
Less Replacement Scheme (Note 4)	28,896	—
Corporation Tax	53,776	—
	136,522	—
NET CURRENT ASSETS	100,000	100,000
Less: Tax Equalisation	—	—
NET TANGIBLE ASSETS	100,000	100,000

#### Notes on the above Statement of Net Tangible Assets:—

- The amortisation of Short Leasehold Premises and Improvements thereto has been calculated at rates which amortise the cost over the periods of the relative leases.
- Opticians' practices and patients' records are included at the prices paid to the vendors on purchases. (It has been explained by the Directors that the values of these are not inflated with their vendors nor the premises from which the practices are conducted but derived from the availability of the records.) In the opinion of the Directors the present value of these assets is not less than the amount stated.
- Creditors include a provision of £18,000 in respect of net liabilities arising from the reallocation of interests in Kelvin Contact Lenses (Canada) Ltd. The provision represents the finalised and audited accounts of Kelvin Contact Lenses (Canada) Ltd. at 30th June, 1971, converted to £2.43 to £ and after Premium arising, less the proceeds of reallocation of assets as estimated by the Directors of the Company, and in our opinion is fair and reasonable.
- Lens Replacement Scheme provision has been calculated on the basis of deferring the proportion of fees received in the preceding twelve months to the average unexpired indemnity period.
- The provisions for Corporation Tax represent the estimated liabilities on profits down to 31st March, 1971 and together with the Tax Equalisation are, in our opinion, adequate.
- Capital projects in hand at 31st March, 1971 not provided for in the above statement amounted to £48,000.

#### DIVIDENDS

No Dividends have been declared by the Company since its incorporation on 9th July, 1968.

#### ACCOUNTS

No audited Accounts of the Company or of any of its United Kingdom subsidiaries have been made up for any period subsequent to 31st March, 1971.

Yours faithfully,

Thornton Baker & Co.  
Chartered Accountants  
Reporting Accountants.  
Spicer and Pegler  
Chartered Accountants  
Auditors to the Company.

#### STATUTORY AND GENERAL INFORMATION

##### 1. Capital

The authorised share capital of the Company on the 15th November, 1969 was £50,000 in 50,000 Ordinary Shares of £1 each, of which 40,000 were issued and fully paid. On the 31st of August 1971, the Company increased its authorised share capital to £150,000 and subdivided each of its shares of £1 each into ten shares of 10p each. On the same day, 800,000 Ordinary Shares of 10p were allotted to the shareholders pro rata by way of a capitalisation issue.

The interests of each Director and of his family, in the ordinary share capital of the Company following the placing pursuant to Contract (i) below, are as follows:—

Name	Ordinary Shares beneficially held by Directors and their families	Percentage of Issued Ordinary Capital
R. K. Watson	186,700	18.67
G. K. Watson	105,450	10.54
C. E. Bloodworth	6,975	0.70
J. G. Labrey	6,250	0.63
Mrs. H. Watson	245,650	24.56

As respects the 500,000 unissued Ordinary Shares, no issue will knowingly be made which could effectively alter the control of the Company without prior approval of the members in general meeting. The Directors have been advised that, following the conclusion of the period for renunciation of the shares which are the subject of the placing, the Company should not be a close company as defined by Section 252 of the Income and Corporation Taxes Act 1970.

##### 2. Material Contracts

The following contracts have been entered into within the two years preceding the date of the publication of this Advertisement, or otherwise than in the ordinary course of business and are, in our opinion, material:—  
(i) Dated 11th November, 1971 between (1) R. K. Watson and Mrs. H. Watson, (2) the Directors and (3) David Q. Henriques & Co. ("the Brokers") being the Contract for placing the 350,000 Ordinary Shares in the Company.  
(ii) Dated 11th November, 1971 between (1) R. K. Watson and Mrs. H. Watson (2) the Company and (3) the Brokers being a Deed of Indemnity in favour of the Company against income tax, surtax and estate duty.  
(iii) Dated 31st August, 1971 between (1) the Company and (2) G. K. Watson on behalf of all the members of the Company being the agreement to allot the 800,000 Ordinary Shares referred to in 1 above.  
(iv) Four Agreements all dated 11th November, 1971 between (1) the Company and (2) (a) R. K. Watson (b) G. K. Watson (c) C. E. Bloodworth (d) J. G. Labrey under which they agreed to serve the Company respectively as Chairman, Managing Director, Managing Director of Kelvin Contact Lenses (Canada) Ltd. and Secretary for periods of (i) 3 years (b) (c) and (d) 5 years from 1st October, 1971 at the following respective annual salaries all inclusive of Directors' fees (a) £3,000 (b) £4,500 (c) £7,000 (d) £4,250 and commissions on the combined annual profits of the Company and its existing subsidiaries of (a) nil (b) (c) and (d) 2.5 per cent. respectively.

##### 3. Articles of Association

The Articles of Association contain provisions (inter alia) to the following effect:—

- On a show of hands each Member has one vote only. On a poll each member has one vote for every 10p paid up on the shares held by him.
- Borrowing by the Company and its subsidiaries (excluding inter-company borrowings) are limited in the aggregate to two and one half times the paid up and consolidated reserves of the Company (excluding this limit cannot be exceeded except with the sanction of an ordinary resolution of the Company in general meeting).
- A Director may contract with and be interested in any contract or proposed contract with the Company and shall not be liable to account for any profit made by him in connection with such contract, provided that the nature of the interest of the Director in such contract or proposed contract be declared at a meeting of the Directors.
- No Director shall vote as a Director in respect of any contract or arrangement in which he shall be interested and if he does so vote, his vote shall not be counted; but this provision shall not apply to any arrangement for the underwriting or subscription by a Director of shares or debentures of the Company or as to any person who, in the exercise of his office as Director, is authorised to enter into any contract or arrangement with which a Director is connected only as Director, creditor or employee or as to any matter concerning the issue of shares by way of capitalisation.
- The Directors may institute schemes for providing pensions for employees, including Directors receiving remuneration.

##### 4. Subsidiaries

Each of the subsidiaries was incorporated in England as a private company on the date, and has the issued and full paid share capital, set out in its name: (a) Watsons, 23rd January, 1941, £1,000; (b) Kelvin, 30th May, 1947, £4,800; (c) Geekay, 3rd July, 1968, £1,000; (d) Gordon, 14th April, 1956, £2,000.

##### 5. General

By Material Contract No. (i) above the Brokers have agreed to subscribe or procure subscribers for 350,000 Ordinary Shares of 10p each at 88p per share payable in full on application. Additionally to be put under option: (i) the application for and for quotation for the issued Share Capital of the Company (including the application for and for quotation for the issued Share Capital of the Company) and the application for and for quotation for the issued Share Capital of the Company (including the application for and for quotation for the issued Share Capital of the Company) and the application for and for quotation for the issued Share Capital of the Company (including the application for and for quotation for the issued Share Capital of the Company).

Surplus clearances under the Income Tax Act 1952 and dividend shortfall clearances under the Finance Act





## IN BRIEF

**BELGIUM:** King Baudouin has appointed M. Gaston Eykens, head of the outgoing Belgian Government, to advise him in his task of choosing the country's next Prime Minister. The appointment confirms reports that there are difficulties forming a new Government following a general election last Sunday in which M. Eykens' coalition of Social Christians and socialists were given a majority but extreme Federalists made spectacular gains.

**TUNISIAN:** Economy Minister Njani Chelly, in an interview with the Socialist Party newspaper L'Action, said oil had just been discovered in the Gulf of Gabes off southern Tunisia. He said 2m. tons of oil per year could be produced from the site and production is expected to begin by March 1973.

**EGYPTIAN:** International Bank of Trade and Development has received a British offer for financing a project for the construction of a railway spare parts, the purchase of cargo ships and the development of the Egyptian fishing fleet.

**ISRAELI:** Cabinet decided to establish an inquiry commission to investigate the management of the Sinai Peninsula following allegations of irregularities raised by a Governmentologist.

## Mrs. Gandhi plays down crisis as Cabinet meets

BY OUR OWN CORRESPONDENT

NEW DELHI, Nov. 14.

AS BORDER tension mounted following a major clash yesterday between Indian and Pakistani forces in the Nadia district of West Bengal, the Indian Premier Mrs. Indira Gandhi appeared set to-day to play the crisis on a low key.

Mrs. Gandhi's surprising "wait and see" attitude was clear from to-day's meeting of the key Political Affairs Committee of the Cabinet which met to hear her report on her three-week tour of Western capitals which ended with her return from Bonn yesterday.

Mrs. Gandhi is understood to have told the Committee that India should await the outcome of efforts launched by some world leaders she met during her tour to persuade President Yahya Khan to initiate a political settlement in East Bengal. This clearly means India will not take precipitate action pending the outcome of the international community's efforts to effect a settlement in East Bengal which would enable the return of nearly 10m. refugees now in India.

Mrs. Gandhi told her senior Cabinet colleagues that world leaders were now convinced of the need for a political settlement in East Bengal and they had undertaken to initiate talks with Yahya.

The Political Affairs Committee also discussed the question of declaring an emergency in the country but no decision was taken. This will now await consultations Mrs. Gandhi is to have with leaders of opposition

parties and also the Congress Parliamentary Party. These should have begun to-day but will wait until to-morrow owing to a lack of time.

To-morrow, Parliament's winter session begins and Mrs. Gandhi will make a statement on her tour and also deal with moves by some parties to censure her Government for "misleading" of the border and refugees issues. Defence Minister Jagjivan Ram is expected to make a statement to-morrow on the border situation and steps taken to meet the threat of invasion in the western sector where forces of both countries are facing each other along the border.

In the eastern sector exchange

of shelling has been taking place at various points especially at Shikarpur where a Pakistani attempt to overrun an Indian outpost was reportedly repulsed.

AP reports from New Delhi: The Indian Government said it had received its first message in many years from a Chinese leader—a cable in which Premier Chou En-lai expressed the hope that friendship between the peoples of China and India will "grow and develop daily".

The message, dated Saturday and received on Sunday, was addressed to Mrs. Gandhi and thanked her for a cable she sent Chou last month congratulating China on its entry into the UN.

## Arabs seek united front

CAIRO, Nov. 14.

ARAB Foreign Ministers to-day set up a five-nation committee to suggest means of settling differences among Arab countries in readiness for the debate on the Middle East in the UN General Assembly later this month.

The committee is made up of the Foreign Ministers of Egypt, Syria, Kuwait, Lebanon and Tunisia. The committee has already drawn up a five-point report dealing with various aspects of the differences between Arab countries, Arab League sources said.

The sources said the report dealt with the Eastern front against Israel—which comprises

Jordan and Iraq—the mobilisation of resources, the question of Palestine resistance and efforts to turn the battle against Israel into a pan-Arab struggle.

The Arab Foreign Ministers began their meeting at the League headquarters in Cairo last night. They are trying to determine a unified Arab strategy on the Middle East crisis before it is raised at the General Assembly.

Egypt was reported to be anxious to avoid division within Arab ranks, especially at the Assembly. But observers here said it was difficult to see how a unified strategy could be reached.

## U.S. coal dispute settled

By Jurek Martin

NEW YORK, Nov. 14.

A PROVISIONAL agreement was reached here on Saturday night on the terms of a new three-year contract covering the nation's soft coalminers. It should end the 44-day strike that has been having increasingly severe effects on segments of American industry.

Although full details of the settlement have not been released, it is believed to include a wage increase of about 30 per cent over the life of the contract. This would be well in excess of the 5.5 per cent a year guidelines for wage increases laid down by the Federal Pay Board, whose approval for the agreement must be secured. However, it is felt here that the Board will probably allow this particular settlement.

AP adds from New York: Many ocean freight rates will advance 5 to 10 per cent on Monday. The U.S. Government exempted international shipping rates from phase 2 controls. As a result, steamship conferences are putting into effect those rate hikes that were suspended during the 90-day freeze.

A major U.S. steamship company spokesman said that ocean freight rates on the trade routes between the U.S. Atlantic coast and the U.K. and France will rise 10 per cent on Monday. Also, rates between Portugal and Spain and the U.S. East coast will rise a like amount. A like advance between Japan and the U.S. West coast is also set, he said.

## Castro hints at Cuban military aid for Chile

BY HUGH O'SHAUGHNESSY

SANTIAGO, Nov. 14.

MAJOR Fidel Castro, the Cuban Premier, in the most important speech he has made during his visit to Chile yesterday offered his hosts Cuban assistance in a large number of fields including, he hinted, the military field. At the same time he called on workers in the mining and other industries to subordinate their interests to the interests of the nation.

His appeal comes at a time when copper workers at Chuquibambilla, the world's biggest open-pit mine, are embroiled in a strike. Dr. Salvador Allende's Left-wing Government with demands for 50 per cent wage increases. Talking to a rally in the northern mining city of Antofagasta, the Cuban Premier said that Chile had only to ask for medical help to be full of Cuban doctors. He assured Chileans they need

never go without Cuban sugar. Referring obliquely to previous mentions of Cuban military assistance Major Castro said, "We are willing to give even our own blood."

Speaking at the nitrate mine of Pedro de Valdivia, outside Antofagasta, the Cuban leader laid special emphasis on the fact that "the nitrate belongs to all Chileans, the textile industry belongs to all Chileans, the copper belongs to all Chileans and all the country's resources belong to the whole country." He condemned the idea of workers' control of individual industries as leading to selfishness on the part of workers in the mining and other industries. Given yesterday's remarks every-thing points to Major Castro making a strong appeal for moderation in wage demands

when he meets the Shugumacama workers later to-day. Meanwhile in the capital, Sr. Americo Zorrilla, the Finance Minister has replied to attacks by the Christian Democratic opposition to President Allende's plans to seek renegotiation of Chile's foreign debt.

Sr. Zorrilla reiterated that the outgoing Christian Democratic Government had left the present Administration with a foreign debt of \$3,127.9m. not counting \$728m. in the unpaid debts of the copper companies. Only Israel had as large a foreign indebtedness per head of population as Chile. He also claimed that the opposition had exaggerated the rise in Government spending abroad this year. This had, he said, risen \$29.9m. in 1971 under the Christian Democrats. At present 40 per cent of Chile's export earnings go on debt servicing and amortisation.

The U.S. is by far Chile's largest creditor, \$335m. is owed to the Export-Import Bank, \$526m. to U.S. Aid, \$310m. to the Inter-American Development Bank and \$122m. to the World Bank.

In the present circumstances, observers here see little possibility of any change in the official opposition to any effective payment for the U.S. copper mines which were taken over by the Government earlier this year. The nationalisation has met with opposition from exporters and the public at large.

## Irish loan successes

BY OUR OWN CORRESPONDENT

DUBLIN, Nov. 14.

EXCESS liquidity in the Irish economy has produced an unexpected flow of money into Government funds this financial year. Last week the Government's new 94 per cent Exchequer Loan, 1991-96, raised £22m. where £15m. to £20m. would have been considered satisfactory.

In August the Government for the first time was able to sell three additional tranches of existing stocks (previously issued only once a year). It sold £13m. at once and £5m. since then. This total for the financial year of the banks here.

so far of £40m. new subscriptions to domestic Government stocks (excluding foreign borrowing) is well above the £27m. estimate made in the Government's capital budget for the year.

So well have the sales gone, in fact, that the Government took the opportunity last month to announce additional capital expenditure of £15m. all to be financed from these stocks. The rush into Government stocks seems largely to be an aftermath of last year's six-month closure of the banks here.

## French wages policy gets a much-needed boost

BY ROBERT MAUTHNER

PARIS, Nov. 14.

THE French Government's incomes policy has been given a much-needed boost with the conclusion at the week-end of two important wage contracts laying down the size of pay rises in the civil service and the State-owned and electricity industry over the next two years.

The agreement between the unions and the electricity and gas enterprises, basically an extension of the first so-called "contract for progress" signed in 1969, provides for a guaranteed 2.5 per cent rise in 1971, 2.5 per cent in 1972 and between 2 and 3 per cent in 1973. The increase in purchasing power will be calculated according to a formula taking into account the rise in domestic product and the production and productivity per-

formance of the two industries concerned.

If the French economic climate in general continues to be satisfactory, factory productivity and consumption of gas and electricity improves, the purchasing power of workers in the industry will be allowed to increase by more than the guaranteed 2.5 per cent. The agreement has been signed by all the unions involved except for the left wing CFDT, which has stated that it must first of all consult its members.

The Civil Service wage agreement, which provides for total pay rises of 7.7 per cent in 1971 and at least 5.5 per cent in 1972, in addition to being index-linked, is of at least equal importance. Up to now, this has been the only sector for which the Government has been unable to persuade the trade unions to accept a global contract.

## U.S. withdrawals pose problems for Saigon

BY OUR OWN CORRESPONDENT

SAIGON, Nov. 14.

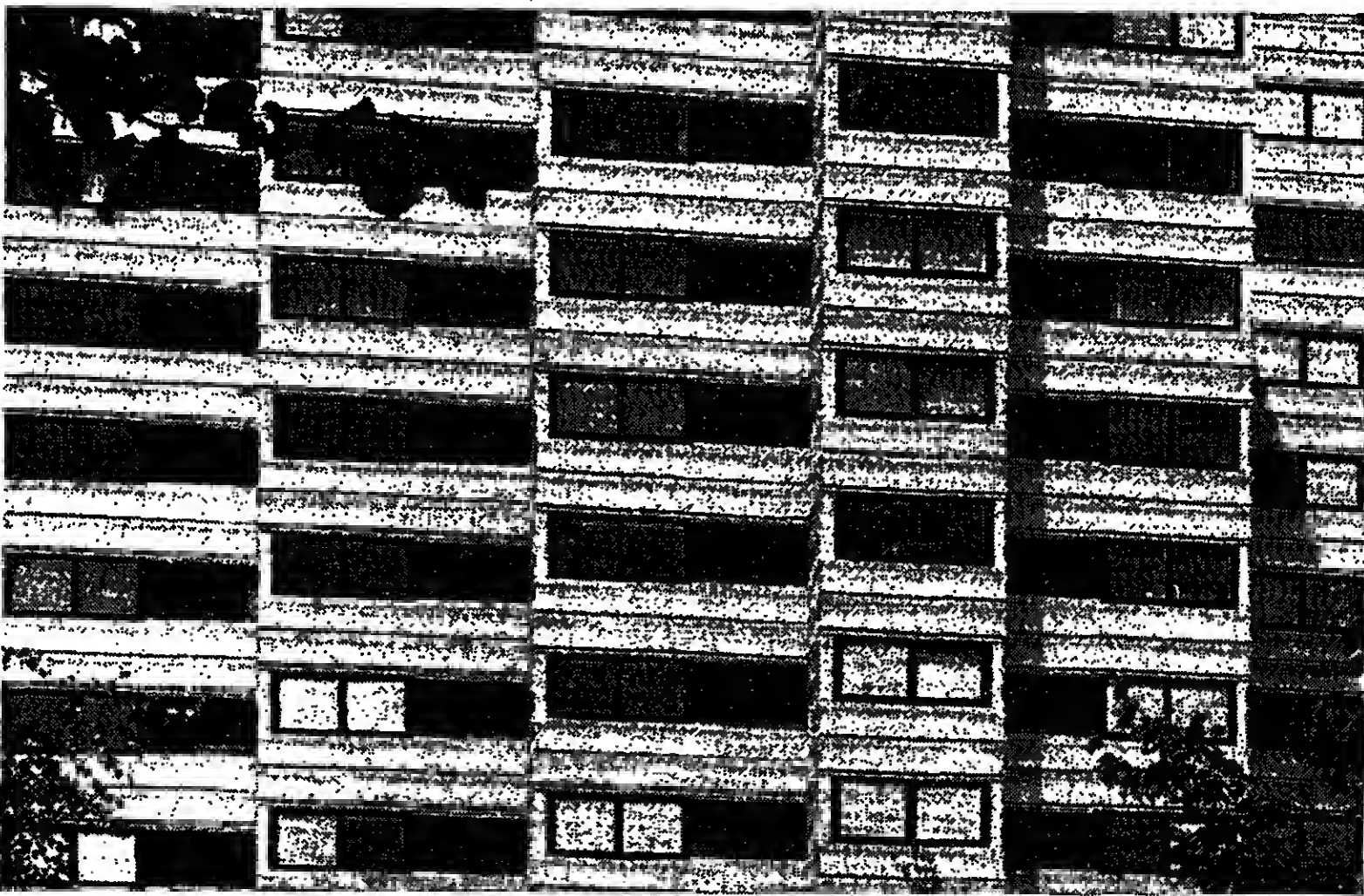
PRESIDENT Nixon's announcement last Friday that the U.S. troop withdrawal rate will be increased to just over 100,000 from December onwards has been anticipated here for months, and therefore came as a surprise to the South Vietnamese Government. Military spokesmen have expressed concern that their troops can take added responsibilities as long as they continue to be supported by U.S. air power.

What the continuing U.S. withdrawal will create problems for the South Vietnamese Government was none the less clearly acknowledged by a Foreign Ministry communiqué issued after the Nixon Press conference. The communiqué announced that there will be increases in the size of the U.S. armed forces here and that the South Vietnamese Army already faces a power shortage particularly in the country's northernmost provinces, where the last remaining U.S. divisions—the

American and the 101st Airborne—either have been or soon will be withdrawn. As a stopgap measure the South Vietnamese are putting together a new division by re-allocating troops from existing units; but this is clearly a manoeuvre which is self-defeating if repeated too often, and in future new units will have to be composed either of new conscripts or of upgraded militiamen. Thus the Foreign Ministry communiqué.

There has been some speculation about Mr. Nixon's reasons for announcing only a two-month covering period, rather than a seven-month period as had been generally expected here. Observers point out that by allowing himself at least the theoretical option of reducing the withdrawal rate between February and June Mr. Nixon is probably hoping to deter the North Vietnamese from launching a dry-season offensive in March or April, which could endanger the remaining American units.

# Hoechst keeps thinking ahead



solution of specific problems. Interdisciplinary thinking, systems analysis and systems technique to bring success. To keep thinking ahead—to solve the problems of today and tomorrow—Hoechst employs 10,300 people in research and development with a research investment this year of more than £60 million.

### Hoechst in Britain

Hoechst UK Ltd is an independent company within the international Hoechst group. Its British staff know their country, its problems, its people; and they know where Hoechst products can inject into Britain's economy the experience gained by the parent company during more than a century in chemistry. In pharmaceuticals, for example, where Lasix—the modern diuretic—has revolutionised therapy. In the textile industry, where Trevira polyester fibre has brought an entirely new concept to fashion. And where membrane structures from Trevira high tenacity fabric have at long last rendered outdoor events independent of the weather. Or in dyestuffs where experiments are proceeding to make the grass look greener in football stadiums and other sports arenas. Whether your problems are in plastics or paint raw materials, in dyestuffs or pigments, in fibres or in pharmaceuticals, in agro-chemicals or films, Hoechst UK can help you promptly and efficiently.



## HOECHST

Hoechst UK Ltd  
Hoechst House, Salisbury Road  
Hounslow, Middlesex  
01-570 7712

## Hoechst research builds for the future

The world's population grows bigger every day. More babies are born. More people live longer. Standards of living are rising. This means more and better houses. More and better hospitals, schools, offices and buildings of every kind. And improved systems from which to build them.

Hoechst research has provided Hostalit Z, a high-impact PVC system for external cladding and window systems. They look attractive and do not require maintenance; they cannot break, chip, rust or corrode even in sub-zero temperatures or corrosive industrial and coastal atmospheres. Hoechst research has provided Mowilith, the material with a thousand uses, for paints, adhesives, cements. And it has provided Trevira high tenacity, the Hoechst polyester filament which has added a new dimension to architecture and building construction.

### Ahead through systems thinking

Plastics for no-maintenance building systems in a busy, modern world, short of time and conscious of cost. Raw materials for paints to brighten and protect the modern home. Trevira high tenacity fabric to break through architectural frontiers—the result of Hoechst know-how and experience in many fields: In the development of a wide range of plastics; in the formulation of suitable pigments; in synthetic resins, fibres and, through its subsidiaries Friedrich Ude GmbH, in constructional techniques. Systems thinking is the Hoechst strategy. Research, development and product experience in many areas are concentrated on the

### COMPANY NOTICES

**NON YATSEI ELECTRONICS CO.**  
Notice has been received from Tokyo the Third Ordinary General Meeting of the Company will be held at Tsukuba, Ibaraki Prefecture, Japan, on Monday, 29th November, 1971.

**HILL SAMUEL & CO. LIMITED**, 190, Wood Street, London, E.C.2, (where judgment terms are available), hereby announce that the Company will be placed in liquidation on 15th December 1971.

**HILL SAMUEL & CO. (CHG.)**, 190, Wood Street, London, E.C.2, (where judgment terms are available), hereby announce that the Company will be placed in liquidation on 15th December 1971.

**BANK OF TOKYO LIMITED**, 25, Avenue de l'Opéra, Paris, 16, France, hereby announce that the Company will be placed in liquidation on 15th December 1971.

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**AMERICAN 4% Gold Renten** (1)  
Austrian 4% Gold Renten (2)  
Austrian 4% Gold Renten (3)  
Austrian 4% Gold Renten (4)  
Austrian 4% Gold Renten (5)  
Austrian 4% Gold Renten (6)

**THE CAISSE COMMUNE DES PORTS DES OUVRIERS PUBLIQUES** (1)  
Boulevard de la République, Paris (17)  
Boulevard de la République, Paris (17)  
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# The law of obscenity is now further confused

BY JUSTINIAN

OCIETY'S aim to control offensive publications has hardly been helped by the Court of Appeal's decision in the Oz case. It is further, rather than easier, to solve the age-old question of where we are to draw the line between permissible and impermissible publications.

The modern law in England is expressed in the form of legal control proscribing obscene literature, defined since 1959 with minor modifications in the Obscene Publications Act, 1959, any article which in its effect tends to deprave and corrupt those who are likely to read, see or hear the matter contained in it.

## Definition

Much of the confusion in the application of the law stems from the word "obscene" and its definition. In other enactments, the Post Office Act, 1953, obscenity has its ordinary dictionary meaning, and in any event the offence is committed if the postal packet contains any obscene article. An obscene article is not necessarily obscene, and an obscene article is always obscene.

Obscenity in this context covers a multitude of sins. And are at least grounds for finding that the Oz editors have acted when they claim that the authorities used the law for the purpose of sustaining the moral restraints of society. The editors would advocate the change of the law in that sense, the difference between prosecutor and defendant may be described as follows.

Historical evidence tends to support that contention. Through ages man has been moved to press books largely out of social and political dissonance. A glance at a list of banned books displays the variety of books outlawed, usually on grounds that they constituted heresy or were morally objectionable. The lives were not unnaturally. But many books were banned "obscene" although they were scarcely that by the narrow meaning of the word. "Fanny Hill" was once banned in Ireland as being obscene and detrimental to both government and morals. Hans Andersen's "Fairy Tales" were banned by the Tsar Nicholas I, also to its lack of obscenity. That also suppressed "Uncle Tom's Cabin" and "The Scarlet Letter". Jack London's "The Call of the Wild" was banned in Yugoslavia. The Victorian era bawled at least was never suppressed. Censorship was concerned with those books which had a political character—political in its widest sense, to include ecclesiastical thought. The mediaeval church set its face against heresy rather than obscenity. Boccaccio with his "Decamerone", Chaucer, Rabelais, Shakespeare and Goethe represented the heights in the literary art and expression of bawdiness. It was only with the introduction of Swift's "snuff" that obscenity fell foul of public opinion, and ultimately the law.

The examples of suppression are legion: in modern times it has only been the innate good sense of those empowered to bring prosecutions that has kept the banning of written works within tolerable bounds. That indefatigable advocate for law reform, Sir Alan Herbert, who died last week, demonstrated in his "Uncommon Law" the lengths to which a prosecutor might, before the 1959 Act, successfully have struck down serious literary works.

He cited the example of a public schoolmaster having to answer an application for a destruction order of the Greek and Latin classics. The magistrate's remarks might be as follows: "We have read with particular repugnance the record of the alleged god Zeus, whose habit it was to assume the shape of swans, hells and other animals, and thus disguised, to force his unwelcome attentions upon defenceless females of good character."

A spate of prosecutions in the mid-1950s, when reputable publishers were taken to court for publishing risqué novels like "The Philanderer" and "Lolita," led to one important change in the law. Obscene books could be published with impunity if it was for the public good, so literary, sociological or medical grounds. It was this sensible reform that has paradoxically led to much of the present confusion.

## Expert evidence

The 1959 Act specifically provided that the accused could call expert evidence of the literary or sociological merit of his work. Since then experts have trotted into the witness box not only to testify to the public worth of the work on trial but also to its lack of obscenity. That practice was endorsed in a case in 1968.

But now that rulings have in effect been reversed, [Expert evidence which hears no relation to the defence of "public good" but is directed to showing that the article is not obscene (as was

so much of the evidence adduced at the Oz trial) is no longer to be admissible. Juries will have to judge the obscene quality of the article unaided by expert views. In fairness to Lord Widgery and his two judicial brethren in the Court of Appeal, their ruling on this score was only interpretative of the Act, and they recognised that it might be an unnecessarily restrictive attitude—but that was a matter for Parliament.

The other change, which has prompted confusion in the obscenity law, was also a by-product of sensible reform. It had been the practice of prosecutors to single out passages in a book and seek condemnation of the whole work. The trial of "Lady Chatterley's Lover" was a prime example. The 1959 Act underlined the law's attitude that the article had to be seen as a whole. A novel had to be read from cover to cover and not dissected.

## Separate items

That was fine for the book. But what about a magazine or newspaper comprising lots of separate items? Was the publication to be damned because a news item taken by itself was obscene? Again the Court of Appeal, on a literal reading of the 1959 Act, ruled that, unlike the publisher of a novel, the magazine publisher—who had a far greater discretion on what to include or leave out—was to have his publication judged under the item-by-item test. Hence the wealth of underhandedly inoffensive and positively good material in Oz sank under the weight of a minority of offensive articles.

There are no easy solutions to the problem of censorship. Once the Danish solution of licensing all publications (and only controlling the making of displaying offensive material) is rejected, any dividing line is bound to be troublesome. The subject needs deep study before the law's appropriate response can be suggested. But one thought is worth injecting into the current debate.

The written word calls for some imagination on the part of the reader; the picture demands no mental application, only imitation. Was it the cartoons in Oz rather than the verbal advocacy that really offended? Do reading, seeing and hearing have equal effect upon the reader, the viewer or the listener? If not, at least one can be drawn which would have implications for those media that are visual rather than verbal.

## APPOINTMENTS Philip Hill Investment Trust chief

Mr. Bryan R. Bassett has been appointed managing director of PHILIP HILL INVESTMENT TRUST from May next year to succeed Mr. Brian A. C. Whitmore, who is to reduce his commitments but will continue as a vice-chairman. Mr. Bassett will resign his partnership with Panmure Gordon and Co., stockbrokers, to take up his new post.

Mr. Owen P. Connellan has joined the Board of ARTAGEN PROPERTIES as an executive director.

Mr. Michael Stoddart has been elected a director of CABLE TRUST. He is a managing director of Singer and Friedlander and a director of C. T. Bowring and Co.

Mr. Peter Glenne, previously vice chairman, has become managing director of FESTIVAL INTERNATIONAL RECORDS in place of the late Mr. Mike Sioman. Mr. Eddie Jarrett has been made a director and Miss Viki Walton international director. The new controller of Artists and Repertoire is Mr. Peter Rehbein.

Mr. Clive E. Dixon has joined the Board of ROBERT HUDSON AND SONS (PTY.), a member of the Robert Hudson Group. He is deputy chairman of Jessel Properties.

Mr. Ronald Clarke, circulation sales manager of the Daily Mirror, has been appointed director of promotions and publicity of the IPC NEWS-PAPER DIVISION. The new circulation sales manager of the DAILY MIRROR will be Mr. Cyril Davidson, currently circulation sales manager of Sporting Life and Reveille. They will both take up their new jobs on December 1.

Mr. Arthur Britten, until recently Editor of the Daily Mail, has been appointed managing director of WIGMORE CASSETTES. Chairman of the Board is Mr. Ian Hunter.

Dr. Norman J. Harper, group director of research and development and chief executive of the Sterling-Winthrop Research Division, has been elected to the Board of STERLING-WINTHROP GROUP.

Mr. John Clewer, managing director of Aerosols International, has been appointed to the Board of JEVES GROUP.

Mr. J. B. Rorke has joined the Board of WOLSEY as a director for sales and marketing. Mr. John Raven is now responsible as a director for the ladies' lingerie and underwear divisions.

## PRIVATE SECRETARY TO MINISTER

Mr. James Prior, Minister of Agriculture, Fisheries and Food, has appointed Mr. J. W. Hepburn, 35, to be his private secretary from November 15 in succession to Mr. D. Evans, who is being promoted.

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MORE THAN  
\$150 MILLION

A mutual fund based  
in Luxembourg  
founded in 1966 by

BANQUE DE BRUXELLES S.A.  
BANQUE INTERNATIONALE A LUXEMBOURG S.A.

## ROBB CALEDON Shipbuilders Ltd.

Points from the Statement by the Chairman, Sir John Brown, circulated with the Report for the year ended 31st March, 1971.

The loss for the year was £504,073 compared with the previous year's loss of £617,007 and the estimate of not less than £350,000 referred to in the interim statement. Although the loss appears to be substantially in excess of the estimate made at the half-year, the difference is explained to a considerable extent by the necessity to provide for an increase in the loss anticipated on one particular ship and the loss incurred by a subsidiary which has now ceased operations.

The reasons for the further substantial losses incurred were first, delay in completion of certain vessels through a failure to obtain a satisfactory rate of output coupled with delays in the supply of and/or subsequent failure in performance of equipment from sub-contractors, involving penalties which were not fully recoverable and, secondly, increases in wages and overheads at substantially higher rates than could reasonably have been anticipated.

The salient feature of the shipbuilding industry at present is the scarcity of orders. The withdrawal of investment grants to shipowners in October, 1970 coincided with a substantial decline in freight rates and an increase in shipbuilding loan interest rates, thereby inhibiting a number of new building projects. We are therefore short of orders but we believe we have good prospects of finding work in the near future of the type suited to our work force and facilities.

The Company's future depends almost entirely on continuity of production and improved output sustained over a period. Working during the last six months encourages us to hope that better things are in store and we are confident that we can look forward to recouping in the current year and in 1972-73 some part of the losses suffered in the past two years.

Copies of the Accounts and Chairman's Statement may be obtained from the Secretary, Caledon Shipyard, Dundee, DD1 5NB.

## AIRFAX JERSEY GROUP LTD.

P. Barker, LL.B., Chairman, reports on the year ended 30th March 1971—  
Turnover at £1.8 million increased by 40%.  
Profits at £513,000 were up by some 21%.  
Dividends total 47% against 20%.

On Prospects, he says:—  
The Group is in a position of greater flexibility and financial strength than ever before. We have budgeted for increases in volume and range of production.  
Capital expenditure commitments—£130,614 at 30th June 1971—have been increased by further machinery orders worth £200,000.  
These will absorb the 29,000 sq. ft. extension occupied in September 1971. Plans for a further 40,000 sq. ft. to be ready in 1972, are being drawn up.  
Our plan for the year is to develop the sophistication and versatility of our general range.  
Unless there is a substantial general downturn in the double jersey industry, we expect net profits for the current year will exceed last year's results.

## Metriation "should keep prices down"

METRICATION should help to keep prices down, Mr. Gordon Bowen, director of the Metrication Board, said yesterday.

If shops and companies used the change-over as an excuse to force prices up they would be hoodwinking the public.

"I am quite prepared to believe there are people who will seize on metrication in this way, but it has nothing to do with the facts of commercial life," he said.

Britain should be fully metric by 1975.

Mr. Bowen said costs might go up—but there is no justification for saying it is because of the change-over itself.

## Potato surplus cost £18m.

THE 1970 potato surplus of 1,338,000 tons cost £18,219,843 to buy off the market, says the annual report of the Potato Marketing Board today.

The Government paid £12,715,593, and the remainder was met by the Board. The Government is also faced with a deficiency payment of £4,504,453 on the crop because the average market price was well below the guaranteed price.

This left £1m. to be charged to the Board's Market Support Fund.

The buying programme was needed because a record yield of 11.3 tons an acre brought a crop of 6,987,000 tons.

"This was far more than was required to meet a rate of demand which, at 158 lbs per head of the population, showed no recovery from the relatively low level of the previous year," says the report.

More than 600,000 tons of the surplus was sold as stockfeed, but no market could be found for nearly 700,000 tons. Heavy producer-controlled marketing yields this year have again boards.

## THOMAS WARRINGTON & SONS LIMITED

(General Building and Public Works Contractors)  
Ellesmere Port

The Directors of Thomas Warrington & Sons Limited have declared an Interim Dividend for the year ending 31st December, 1971, of 94% (1970—94%) payable on the 15th December, 1971.

The following is a statement by Brian Warrington, Chairman:

"In my statement in April I mentioned that the volume of work available and obtained during 1970 was much below that for the previous year and that I did not expect the building industry to return to the peak level it had reached over the years prior to 1970, for some years. However, there now appears to be an upturn in the activity of the building trade but I feel it will be sometime before the benefit of this is felt.

We are still obtaining our fair share of contracts for which we are tendering and there is a further improvement in the private sector. We are expanding the property investment side of the company considerably, particularly in the industrial field, and enquiries we are receiving for lettings up to date are very encouraging.

Subject to no unforeseen circumstances, I feel that the results we anticipate producing for the year ending 1971 should prove satisfactory."



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CP Hotels really open doors.

For businessmen visiting Canada, staying at a CP Hotel is the best entree into Canadian business circles you could hope for.

CP Hotels, stretching coast to coast, are the best hotels equipped for meetings, conventions and everything a businessman could need. Canadian businessmen will be impressed to find you there.

Canadian Pacific isn't just hotels. They operate sea, rail road and air services too. Find out everything Canadian Pacific

has to offer the businessman in Canada by contacting your travel agent now. After all, we have the key to the doors.

Contact: Your Travel Agent or American Express Space Bank 01-493 7060 and R. M. Brooker 01-836 1942





# Bernard Matthews Limited

## SHARE CAPITAL

*Issued and to be  
issued fully paid*  
**£1,000,000**

# Kleinwort, Benson Limited

*The Ordinary Shares now offered for sale will rank in full for all dividends hereafter declared or paid on the Ordinary Share Capital of the Company. However, it is not the intention of the Directors to recommend any dividends in respect of the 53 weeks ending 2nd January, 1972.*

**BANKERS**  
**LAYS BANK LIMITED.**  
et, Norwich, Norfolk, NOR 11E.

**REGISTRARS AND TRANSFER OFFICE**  
**BARCLAYS BANK TRUST COMPANY LIMITED.**  
 Station Division, P.O. Box No. 123, 2 London Wall Buildings,  
 London Wall, London, EC2P 2BU.

NOTES:-

- (a) Investment Grants received have been deducted from the cost of Fixed Assets shown above.
- (b) Taxation Equalisation Reserve represents Corporation Tax at 40% on the difference between the net book value of fixed assets ranking for capital allowances and their corresponding written down value for depreciation purposes.
- (c) Commitments for capital expenditure not provided for including expenditure authorised but not contracted for amounted to Rs.60,000 at 31st July, 1971. Rentals payable in the future on leasing agreements, with three year primary period, for plant and equipment amounted to approximately Rs. 10,000.
- (d) The bank overdraft shown above as at 31st July, 1971, secured. Facilities have since been arranged on an unsecured basis and the security has been released.

3. **DIVIDENDS**  
No dividends have been paid on the Company's issued Ordinary Share Capital in respect of any of the last five financial periods ended 27th December, 1970 or in respect of the period ended 11th July, 1971.

4. **ACCOUNTS**  
No audited accounts of the Company or its subsidiaries have been prepared for any period subsequent to 11th July, 1971. The next accounts for submission to members in General Meeting will be those in respect of the 52 weeks ending 2nd January, 1972.

Yours faithfully,  
DIXON, WILSON & CO.,  
Chartered Accountants.

## STATUTORY AND GENERAL INFORMATION

### CAPITAL HISTORY

1. The Company was incorporated in England on 8th April, 1969 as a private company under the name *Farmgma Limited*, which was changed to its present name by resolution dated 30th June, 1969.
2. Prior to 3rd August, 1970 the authorised share capital of the Company was £100,000 divided into 100,000 Ordinary Shares of £1 each, all of which were issued created as fully paid. On that date the authorised share capital was increased to £125,777 by the creation of 16,777 Ordinary Shares of £1 each all of which new Ordinary

Capital of £21,000 to £215,779,755, of which £181,100,000 was contributed by the shareholders on that date as consideration under contract (RD below).

3. On 11th November, 1971, the 117,777 Ordinary Shares of #1 share were sub-divided into 463,106 Ordinary Shares of 25p each, the authorised share capital was increased to £1,260,000 by the creation of a further 4,636,892 Ordinary Shares of 25p each and 3,658,932 Ordinary Shares were issued by way of capitalisation of the balance on account and reserves. On the same date the Officers Clause of the Memorandum of Association of the Company was altered and the Company adopted new Articles of Association, whereby it became a public company.

**AGREEMENT WITH KLEINWORT, BENSON LIMITED**  
Under contract (K) below, Kleinwort, Benson Limited have agreed, subject to permission to deal in and for

under cover of a bill of exchange, the said Shares shall be delivered to the Company being granted by the Council of the Stock Exchange, London, on or before 15th November, 1871, to purchase from the vendors 1,600,000 Ordinary Shares at a price of 50s per Share in the following proportions: B. T. Matthews (500,000), J. K. Matthews (500,000) and M. C. Christie and P. Scarle, the trustees of settlements made by B. T. and J. K. Matthews (500,000), with a view to such Shares being hereby offered for sale at 10s per Share, Kieulworth, Benson Limited will pay an advance of 5s per Share on the said Shares, and the said Shares shall be delivered to the Company in full payment of the said advance and shall be transferred to the Company in the name of the said Company as the said Shares shall be so transferred.

charges and expenses of and incidental to this Offer for Sale, including the increase of the Company's authorized share capital, the application for permission to deal in and for quotation for the issued Ordinary Shares, the adoption of new Articles of Association, all accountancy and legal expenses and a fee payable to Kleinwort Benson Limited, are estimated to amount to £45,000 and are payable by the Company.

persons named, are estimated to amount to \$100,000 and are payable by the Company.

**ARTICLES OF ASSOCIATION**  
 The Articles of Association of the Company contain, *inter alia*, provisions to the following effect:—

(A) On a show of hands every member who, being an individual, is present in person, or, being a corporation is present by a representative or proxy not being himself a member, shall have one vote and on a poll every member shall have one vote for every share of which he is the holder.

(8) A Director, notwithstanding his interest, may be counted in the quorum present at any meeting where he or any other Director is appointed to hold any office or place of profit under the Company or where the terms of any such appointment are arranged, and he may vote on any such appointments or arrangements other than his own appointment or the arrangement of the terms thereof.

(C) The Directors shall limit borrowings by the Company and/or any of (so far as the Company's powers extend) can be secured by a floating charge on the assets of the Company equal to 1) the aggregate of (a) the amount of the Company's borrowings, (b) the amount of the Company's bank overdrafts, (c) the aggregate of (i) the amount paid up or credited as paid up on the share capital of the Company, and (ii) the total of the capital and revenue reserves (as defined) of the Company and its subsidiaries.

(D) The Directors shall be paid out of the funds of the Company such remuneration for their services as Directors as they shall from time to time determine but at a rate not exceeding £2,500 per annum for each Director. The Company in General Meeting may vote extra remuneration to the Directors in respect of any financial year which shall (unless otherwise directed by the Resolution by which it is voted)

(8) The statutory provisions as to age limit for Directors apply to the Company.

**SUBSIDIARIES**  
The Company has no subsidiaries which currently carry on business.

**DIRECTORS' AND OTHER INTERESTS**  
1. Upon completion of Contract (I) the interests of the Directors and their families (as defined by the regulations of The Stock Exchange, London) in the Ordinary Shares of 25p each of the Company will be as follows:—

	No. of Ordinary Shares	Beneficial	Other
B. T. Matthews .. .. .	2,375,000	—	—
S. Sutherland Smith .. ..	5,000	—	—

C. J. H. Simpson	..	..	..	..	5,000	—
R. A. N. Napier	..	..	..	..	5,000	—
S. A. Briggs	..	..	..	..	5,000	—
M. C. Chittock	..	..	..	..	5,000	117,829†

†This holding is also included under B. T. Matthews' beneficial interests.

2. None of the Directors of the Company has a Service Agreement with more than 12 months to run either with the Company or any of its subsidiaries.

(j) Dated 11th November, 1971 between B. T. Matthews, J. K. Matthews, M. C. Chittock and P. Scarle the Company (2) the Directors (3) and Kleinwort, Benson Limited (4) being the agreement with Kleinwort Benson Limited referred to above.

freehold land whereunder the vendor has the right to subscribe for Ordinary Shares of the Company a value of £5,000 on the terms of this Offer for Sale. B. T. Matthews has undertaken to the Company in the event of any exercise by the vendor of such rights he will satisfy any obligations of the Company by selling to the vendor on the terms of this Offer for Sale.

(iv) Dated 11th October, 1971 between the Company (1) and B. T. Matthews (2) whereby B. T. Matthews

GENERAL

1. It is expected that, following this Offer for Sale and on the basis of the information now available, Company will not be a "close company" as defined in Section 282 of the Income and Corporation Taxes Act 1911.

2. No part of the proceeds of this Offer for Sale is payable to the Company and no amounts are required to be raised for any of the purposes mentioned in paragraph 4 of Part I of the Fourth Schedule to the Companies Act, 1948.

3. Clearance was obtained under Section 28 of the Finance Act 1952.

under Section 265 of the Income Tax Act, 1962 and Section 298 of the Income and Corporation Taxes Act 1 and have been obtained, as appropriate, for all relevant periods up to 31 December, 1970 in respect of the Company and its subsidiaries. The Company has been given the usual indemnities against estate duty and taxation.

4. Neither the Company nor any subsidiary has any litigation or claims of any material importance pending threatened against it.

5. Save as disclosed herein, no share or loan capital of the Company or any of its subsidiaries is under option or agreed conditionally or unconditionally to be put under option.

6. Save as disclosed herein no share or loan capital of the Company or any of its subsidiaries has within the 1 years preceding the publication of this Offer for Sale been issued or is proposed to be issued either for cash or otherwise.

7. Save as disclosed herein no commissions, discounts, brokerage or other special arrangements have been made or are proposed to be made in connection with the Offer for Sale.

**DOCUMENTS ON DISPLAY**  
Dixon, Wilson & Co. have given and have not withdrawn their written consent to the issue of this Offer for  
with the inclusion therein of their Report and references thereto in the form and content in which they  
included.  
(The above mentioned consent was given on 11/11/1944)

attracted to you in their Report and the reasons therefor, and copies of the contracts listed above have been secured to the copy of this Offer for Sale which has been delivered to the Registrar of Companies for filing.

Copies of the following documents may be inspected at the offices of Theodore Goddard & Co., 15 St. Mark Lane, London, E.C. 4, or at the offices of Messrs. J. & W. Morgan & Co., 15 Abchurch Lane, London, E.C. 4, on any business day following the date of publication of this Offer for Sale, Saturdays excepted, for a period of fourteen days following the date of publication of this Offer for Sale:-

- (i) the Memorandum and Articles of Association of the Company;
- (ii) the audited consolidated accounts of the Company and its subsidiaries for the two accounting periods ended 31st December, 1970 and for the twenty-eight weeks ended 11th July, 1971;
- (iii) the Material Contracts referred to above; and
- (iv) the Report of Messrs. Wilson & Co., the Valuers.

(iv) the Report of Dixon, Wilson & Co., their statement of adjustments and their written consent;



# Bill for boosting jobs prospects £1,600m.—Carr

BY ALEX HENDRY, LABOUR REPORTER

MR. ROBERT CARR, Secretary for Employment, yesterday listed the "massive catalogue of measures—costing more than £1,600m.—taken by the Government to reduce unemployment."

He told a Young Conservative conference at Bournemouth: "All our actions have been designed to get the economy out of its six-year rut, to get it on the move again and so to create more jobs and more wealth for all of us. We shall not cease until we have succeeded."

Later this week the national unemployment figures will be published and could be more than 900,000. Last month showed 886,552 unemployed. The steady increase, averaging 18,000 a month over the past six months, triggered the TUC campaign that will culminate with a mass rally and lobby of Parliament next week.

Regional rallies have been held throughout the country. Over the weekend, the town of place—in Belfast, Rochester and Cardiff.

In Rochester, Mr. Tom Jackson, general secretary of the Union of Shop Distributive and Allied Workers, said: "This will be the worst Christmas we have had. The worst our children

have seen—the blackest since the war."

Mr. Carr, Mr. Alf Allen, general secretary of the Union of Shop Distributive and Allied Workers, told a rally: "We say that full employment must take priority over all other national objectives."

Preparations for the final rally next week include a call to 250,000 engineers in London and the South East to stop work for the afternoon and take part in the demonstration against unemployment. Delegations from all over the country are expected to attend the rally.

Like the Government, they have given the problem of unemployment "first priority" status. On their side, trade unions have been discussing overtime bans, shorter working weeks and opposition to redundancies to try to ease the problem.

Mr. Carr yesterday explained the Government's programme which includes: £1,400m. in tax reductions; £10m. to modernise homes in development areas; £160m. for a crash programme of public works in the same area; and £70m. worth of new shipbuilding orders to help employment particularly in Scotland and the North East.

He said: "consumer credit will be the worst Christmas we have had. The worst our children

the lowest level since the last Conservative Government, training programmes had been expanded with particular attention to the needs of young people, and the Government was urgently looking at Young Conservative ideas for finding community work for unemployed young people.

Mr. Carr went on: "This is a massive catalogue of measures—of action already taken."

Earlier, he had said: "The present crisis in unemployment is part of an inheritance. It is the bitter fruit of uncontrolled wage inflation stimulated by the Labour Government in an attempt to win the last election coming on top of the six years of economic stagnation over which they presided."

"But it doesn't matter who is to blame. All that matters is to attack the problem. This we are doing."

## PROPERTY SOLD FOR £500,000

L. Frankenberg has sold its freehold and long-leasehold interest in 37 Houndsditch/79 Bevis Marks, London, EC3 to Haslemere Estates, for about £500,000, to be converted and modernised for office purposes.

## Warning by pilots to BEA

BEA'S 1,400 pilots appeared at the weekend to get a course for a head-on clash with the airline.

A letter from the BEA Pilots' Council in the British Airline Pilots' Association warns them to put financial affairs in order ready to withstand a period of possible unemployment. Capt. Don Laing, the Council chairman, says they will now prepare to withdraw all co-operation with BEA from April 1 next.

The pilots expect the airline to retaliate with a "lock out." So, in order to give themselves time to prepare financially, they have delayed their action for over four months. Capt. Laing also says in his letter that passengers will have to book on other airlines.

The dispute ranges over many grievances, including pay, meal allowances and survival training.

## Tyne tugboat men return to-day

By Our Own Correspondent

SOUTH SHIELDS, Nov. 14. THE TYNE tugboat men return to work to-morrow following the settlement of their strike which began on October 29 and laid up the river's tug fleet. Agreement on the men's pay claim was reached at talks in Newcastle yesterday and was accepted by the men here to-day.

The tugboat men originally claimed increases of about 44 per cent. They stopped work after refusing an offer of 10 per cent. Delegates would not say to-day what increase they had won, but it is believed to be around 30 per cent.

The North East Coast Tugboatmen's Association said agreement had been reached on a wages scale giving a guaranteed minimum level of basic earnings and certain adjustments for overtime work. It also provided for a review within the next 12 months of the working system in Tyne.

## IATA begins probe on profitability

BY MICHAEL DONNE, AEROSPACE CORRESPONDENT

THE INTERNATIONAL Air Transport Association—the world's "airline parliament"—has begun a major economic study designed to pinpoint problems and indicate ways of achieving satisfactory profitability.

It will be a wide-ranging and forward-looking study, according to Mr. Knut Hammarskjöld, director-general of IATA, and will cover all factors affecting the world air transport industry's economic performance.

A preliminary report is planned for next March "which will outline possible options open to the industry and various avenues that might be explored which, taken together, could lead to improved profitability."

### Objectives

Mr. Hammarskjöld discloses the airlines' plan in his annual review of the world air transport industry, to be presented to-day to IATA's annual meeting in Honolulu.

Among the objectives the industry ought to have are, he says:

1. Achievement of an adequate return on capital;
2. A "lean and hard management philosophy with heavy emphasis on innovation, improved efficiency and productivity";
3. Improved cost controls with particular stress on indirect costs;
4. Greater harmonisation of collective industry marketing policies, including the development of new approaches to meet demands for low fares;
5. Improved methods of establishing passenger fares and cargo rates, and a simplification of the fares and rates structure;
6. Improved long-term corporate planning, leading to a better matching of capacity with demand; and
7. Collective industry strategic planning on appropriate subjects.

### Favourable

But long-term economic prospects, he believes, should provide a generally favourable base for the development of air transport.

Most Governments are committed to policies of economic growth, despite current monetary and other difficulties. "An expanding world economy and rising affluence, along with other favourable socio-economic trends such as rising education and greater leisure time, should provide a sound basis for the future demand for air service, in the absence of adverse political and economic developments."

### SHEEPBRIDGE SHORT-TIME WORKING

Short-time working begins to-day for about 100 men in the sand foundry at Sheepbridge Engineering, Chesterfield. The Amalgamated Union of Engineering Workers has persuaded the management to accept work sharing instead of introducing about 50 redundancies in the sand foundry. A union official said that for the men it would mean alternate weeks at work and on the dole.

## INTERIM STATEMENTS

# Redland Limited

### INTERIM STATEMENT

The estimated group results (which are unaudited) for the half-year ended 30th September, 1971, were as follows:—

	Half year ended 30.9.71	Half year ended 30.9.70	Year ended 31.3.71
All figures in £'000's			
<b>TURNOVER</b> (excluding inter-company sales):—			
Sales in the United Kingdom	24,081	22,144	41,377
Exports from the United Kingdom	270	223	584
Sales by overseas subsidiaries	12,219	7,920	23,487
	36,570	30,287	65,448

### GROUP PROFIT FOR THE PERIOD BEFORE TAXATION

After all charges and expenses:—			
United Kingdom operating subsidiaries	2,641	1,664	2,348
Overseas operating subsidiaries	2,188	884	3,621
Associated companies overseas—share of profits, less losses, attributable to group companies	762	5,591	592
	5,591	3,140	7,173

### ESTIMATED TAXATION:—

On profits of United Kingdom and overseas subsidiaries	2,175	1,193	3,196
On share of profits of associated companies	400	278	575
	3,016	1,669	3,402

### PROFITS ATTRIBUTABLE TO OUTSIDE SHAREHOLDERS IN SUBSIDIARIES:—

Subsidiaries profits	620	257	891
Share of profits of associated companies	25	645	21
	645	278	907

### Profits attributable to Redland Limited

	2,371	1,391	2,495
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The Directors are of the opinion that the results for the twelve months ending 31st March, 1972 will show a substantial improvement over those of the previous year, but they do not expect the percentage improvement in the second half of the year to be as great as that shown for the first half.

### NOTES

1. The group profit has been arrived at, and is presented, in a similar manner to that adopted for the annual accounts, but the current half-year's figures are subject to audit and year-end adjustments. The results include those of the European subsidiaries and associates for the half-year ended 30th June, 1971, which have been converted into sterling at current rates of exchange.
2. Taxation comprises United Kingdom corporation tax calculated at 40% of the taxable profits, and the figures for the half-year ended 30th September, 1970, have been adjusted to this rate. Overseas taxes have been calculated at the current rates.
3. The estimated profits are after charging, for the half-year ended 30th September, 1971, depreciation amounting to £1,847,000 (1970 £1,645,000) and interest payable of £821,000 (1970 £816,000).

## MARTIN-BLACK LIMITED

Group (unaudited) results for the half year to 30th June, 1971

	Half Years to 30th June, 1971	30th June, 1970	Year to 31st December, 1970
<b>TURNOVER</b>	£2,393,600	£2,147,000	£4,298,874
Gross Trading Profit	£ 304,900	£ 263,500	£ 569,412
Less: Depreciation	60,200	55,700	112,866
Interest Payable	34,700	25,300	69,833
Net Trading Profit	210,000	182,500	386,714
Add: Investment Income	—	—	11,528
Profit Before Taxation	210,000	182,500	398,242
Estimated Taxation	69,000	78,000	174,380
	£ 121,000	£ 103,500	£ 223,860

In the four months which have elapsed since 30th June, 1971, Order Intake and Sales have shown a downward trend which reflects the lower levels of heavy industrial activity in U.K. and in some of our Overseas Markets. It is difficult to forecast any significant improvement for the remainder of the current year, but there are signs of some restoration of demand for 1972.

The Directors, however, are reasonably confident that the full results for 1971 should be at least comparable with those of 1970, and, with the general liquidity of the Group showing improvement, are proposing to raise the Interim Dividend by one-half per cent to 4½%—although this does not necessarily indicate an increase in the total dividend to be paid for the year which must of course depend upon the final results.

The Interim Dividend will be paid on 14th December, 1971, to Shareholders on the Register at close of business on 22nd November, 1971.

12th November, 1971.

## ADVERTISEMENT

# Electrostatic copies on ordinary paper cost more!

Many users of copying equipment face changes in their Rental Contracts early next year.

A recent announcement from one of the top names in the Copying Industry to their Users heralds price increases and changes in existing contracts which for many is the second change in 12 months. These price changes given under a 90-day notice are the result, the Company claims, of recent unprecedented increases in costs and the standards of service and product innovation which the Company is committed to on behalf of its many customers.

In response to the C.B.I. initiative, copy charge increases have been limited to 5%. However, rental charges will be increasing by as much as 20%.

The full impact of these price changes will vary from User to User, who under a 30-day termination clause have till the 31st December to review their copy costs.

No one need face higher costs, since the introduction of Apeco "Bond-Like" copy papers, using the direct image electrostatic copying method, means higher copy quality and overall reduced costs.

Apeco, a pioneer in the Copying Industry since 1939, markets a range of seven copier models through branches in major cities as well as a network of Exclusive Local Distributors.

World-wide sales of Apeco over the last 3 years have increased by an average of 35% each year and during 1971 have increased in the U.K. by 52%. Apeco Limited is the fastest growing subsidiary of Apeco International.

Recently a senior company spokesman attributed the cost savings to the more economical direct image electrostatic process and the built-in quality and control in the company's manufacturing units in the U.S.A., Europe, and Australia.

Apeco is the only company in the Copying Industry to back up its proven reliability and high standards of preventative maintenance for those Users purchasing the Apeco Copymaker, by a Million Copy Guarantee.

Something to smile about from

# APÉCO

Apeco prices have not risen since 1967.

The introduction of Roll-O-Matic Apeco electrostatic copymakers has meant a reduction of 20% for many New Apeco Users.

Apeco will cut copying costs further, by technical innovation and by increased efficiency.

You have the choice of: Rental, Outright Purchase, Lease, or an Equity Copy Plan tailored to your needs. And 7 MODELS TO CHOOSE FROM.

and Apeco "Bond-Like" means crisp, dry copies on high quality lightweight paper.

Now Apeco bring you the all new versatile

# PRINTOUT



Features to make you smile

- |   |   |
|---|---|
| Greater copy capacity<br>Get copies up to 11½" x 17" (A3) | Trims copies to size<br>Trim waste up to 42%.                                     |
| Faster copies<br>First copy in 4 seconds.                 | Automatic multiple copies<br>Dial the number of copies, up to 99.                 |
| 1000 copies from a roll<br>"Bond-Like" paper.             | Console unit<br>Backed by a unique Million Copy Guarantee for proven reliability. |
| Load paper less often.                                    |   |

If you are using an ordinary paper copier you have 46 days left to avoid higher costs.

Use the hot line and call:

Apeco London 01-739 2984  
Apeco Manchester 061-872 5597  
Apeco Birmingham 021-236 3468  
Apeco Bristol 0272-24759

To be put in touch with your nearest Apeco contact

# APÉCO



## Bernard Matthews Limited—continued

### PROCEDURE FOR APPLICATION

Applications must be made on the accompanying Application Form and, with the exception of employees' applications (which are referred to below), must be for a minimum of 100 shares or a multiple thereof up to 2,000 shares, thereafter in multiples of 500 shares up to 5,000 shares, thereafter in multiples of 1,000 shares up to 20,000 shares and thereafter in multiples of 5,000 shares.

Each application must be accompanied by a separate cheque for the full amount payable on application and must be forwarded to KLEINWORT, BENSON LIMITED, REGISTRATION AND NEW ISSUES DEPARTMENT, 13 ROOD LANE, LONDON, EC3M 8BB, SO AS TO ARRIVE NOT LATER THAN 10 A.M. ON THURSDAY, 18TH NOVEMBER, 1971. Cheques, which must be drawn in sterling on a bank in and be payable in England, Scotland or Wales, must be made payable to "Kleinwort, Benson Limited" and be crossed "Not Negotiable". All cheques are liable to be presented for payment on receipt. Due completion and delivery of the Application Form accompanied by the necessary cheque will constitute an undertaking that the cheque will be honoured on first presentation and attention is drawn to the declaration on the Application Form to this effect. Kleinwort, Benson Limited reserves the right to retain all Letters of Acceptance and surplus application moneys pending clearance of all applicants' cheques, and to reject any application (and in particular multiple or suspected multiple applications) or to accept any application in part only.

Prerogative consideration will be given to applications made by Executive Directors and employees of the Company up to a maximum of 160,000 Ordinary Shares, if made on the special pink Application Forms provided. Such applications must be for a minimum of 50 shares.

Acceptance of applications will be conditional upon the Council of The Stock Exchange, London, granting on or before 19th November, 1971, permission to deal in and quote for the whole of the issued Ordinary Capital of the Company. Moneys paid in respect of all applications will be returned if such permission and quotation are not granted by that date and in the meantime will be retained by Kleinwort, Benson Limited in a separate account. No receipt will be issued for the payment on application, but an acknowledgment will be forwarded in due course to the applicant's bank, either by way of a fully paid Letter of Acceptance for all or part of the shares applied for, or by the return by cheque through the post of the application moneys or any surplus thereof.

Letters of Acceptance will be renewable up to and including Friday, 17th December, 1971, and the Ordinary Shares now offered for sale will be registered free of stamp duty in the names either of the original applicants or of the persons in whose favour Letters of Acceptance have been renewed provided that, in the case of renewal, Letters of Acceptance duly completed in accordance with the instructions contained therein are lodged for registration on or before Friday, 17th December, 1971.

Share certificates will be available for collection from Barclays Bank Trust Company Limited, Registration Division, 2, London Wall Buildings, London Wall, London, EC2P 2BU on Monday, 3rd January, 1972. In the event that these certificates are not collected before Friday, 14th January, 1972, they will be automatically despatched by ordinary post to the registered holder or, in the case of joint holdings, the first named holder at the risk of the registered holder(s).

Copies of this Offer for Sale with Application Forms may be obtained from:—

KLEINWORT, BENSON LIMITED,  
Registration and New Issues Department, 13 Rood Lane, London, EC3M 8BB.  
JAMES CAPEL & CO., Winchester House, 100, Old Broad Street, London, EC2N 1BQ.  
BARCLAYS BANK TRUST COMPANY LIMITED,  
New Issues Division, P.O. Box 78, Malet Street, London, EC4P 4BJ.  
BARCLAYS BANK LIMITED,  
P.O. Box 36, Bank Place, Norwich, NOR 70A, and 30, London Street, Norwich, NOR 1LE.

THE APPLICATION LIST WILL OPEN AT 10 a.m. ON THURSDAY, 18th NOVEMBER, 1971, AND WILL CLOSE ON THE SAME DAY.

## Bernard Matthews Limited

(Incorporated under the Companies Act, 1948)

### OFFER FOR SALE BY KLEINWORT, BENSON LIMITED

of 1,600,000 Ordinary Shares of 25p each at 100p per share payable in full on application

### APPLICATION FORM

To: KLEINWORT, BENSON LIMITED

Gentlemen,

Number of shares for which application is made	Amount of cheque enclosed
	£

Applications must be made for a minimum of 100 shares or a multiple thereof up to 2,000 shares, thereafter in multiples of 500 shares up to 5,000 shares, thereafter in multiples of 1,000 shares up to 20,000 shares and thereafter in multiples of 5,000 shares.

I/We enclose a cheque for the above-mentioned sum, being the amount payable in full at 100p per share on application for the above-stated number of Ordinary Shares of 25p in the Company and I/we offer to purchase that number of shares upon the terms of your Offer for Sale dated 11th November, 1971 and subject to the Memorandum and Articles of Association of the Company and I/we hereby undertake and agree to accept the same or any lesser number of shares in respect of which this Application may be accepted. I/We hereby authorize you to procure my/our name(s) to be placed on the Register of Members of the Company as holder(s) of the said shares so far as they have not been effectively renounced and to send a renewable Letter of Acceptance in respect thereof, and/or a cheque for any moneys returnable to me/us by ordinary post at my/our risk to the address first given below.

I/We understand that due completion and delivery of this Application Form accompanied by a cheque will constitute an undertaking that the cheque will be honoured on first presentation.

IMPORTANT:—To comply with the provisions of the "Exchange Control Act, 1947, the Applicant(s) must make the Declaration contained in the following paragraph, or, if unable to do so, must delete such paragraph and arrange for this Application to be lodged through an Authorized Depositary" or an Approved Agent in the Irish Republic. No application can be considered unless this condition is fulfilled.

I/We declare that I/we am/are not resident outside the Scheduled Territories and am/are not acquiring the shares as the nominee(s) of any person(s) resident outside those Territories.

Signature \_\_\_\_\_ Dated \_\_\_\_\_ 1971

PLEASE USE BLOCK CAPITALS

Christian Name(s) (in full)  
Surname and designation (Mr., Mrs., Miss or Title)  
Address (in full)

(2) Signature \_\_\_\_\_ (3) \_\_\_\_\_

Christian Name(s) (in full)  
Surname \_\_\_\_\_ (Mr., Mrs., Miss or Title)  
Address (in full)

Please pin cheque here

ALL JOINT APPLICANTS MUST SIGN

A Corporation should sign under the hand of a duly authorized officer who should state his representative capacity. This Application Form should be completed and forwarded to Kleinwort, Benson Limited, Registration and New Issues Department, 13 Rood Lane, London, EC3M 8BB together with a cheque for the full amount payable so as to arrive not later than 10 a.m. on Thursday, 18th November, 1971.

A separate cheque must accompany each Application Form. Cheques, which must be drawn in sterling on a bank in and be payable in England, Scotland or Wales, must be made payable to "Kleinwort, Benson Limited" and crossed "Not Negotiable". No application will be considered unless these conditions are fulfilled. All cheques are liable to be presented for payment.

No receipt will be issued for the payment on application, but an acknowledgment will be forwarded in due course to the applicant's bank, either by way of a fully paid Letter of Acceptance for all or part of the shares applied for, or by the return by cheque through the post of the application moneys or any surplus thereof.

\*EXCHANGE CONTROL ACT, 1947

Authorized Depositaries are listed in Appendixes I and II of the Bank of England's Notice EC1, and include Banks and Stockbrokers in, and Solicitors practicing in, the United Kingdom or the Channel Islands.

An Approved Agent in the Irish Republic is defined in the Bank of England's Notice EC 10 (Third Issue), as amended, as a bank in the Irish Republic, a member in the Irish Republic of a Stock Exchange in the Irish Republic or of the Provincial Bankers' Stock Exchange or a Solicitor practicing in the Irish Republic.

The Scheduled Territories at present comprise:—The British Commonwealth (except Canada and Rhodesia), the Irish Republic, British Trust Territories, British Protectorates and Protected States, Bahrain, Iceland, the Hashemite Kingdom of Jordan, Kuwait, Libya, Qatar, South Africa and South West Africa, Western Samoa, and the People's Democratic Republic of Yemen.







# Building and Civil Engineering

## A touch of Venice

ONE of the features of the 261-bedroomed hotel being built at Stratford-upon-Avon for Lex Services Group at a cost of £2m. is the creation of a canal leading from the River Avon past the hotel linking it with the Shakespeare Theatre.

The possibility of a ferry service to take hotel guests directly to the theatre by way of the canal is under consideration. The Stratford-upon-Avon Hotel, it will be operated by Tilton International.

Reinforced concrete frame construction with brick cladding and a feature of a local stone

## Overlooking the sea

TWO housing contracts, with a combined value of £394,000, awarded to Holland Hannen & Cubitts (North West), involve the use of the Lowton Cubitt method of building. Larger of the two, calls for 131 houses at Bulwys Lane, Old Colwyn, for the Borough of Colwyn Bay.

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Telephone: Blitchley 4971

Improving oil rig design

existing premises in Scotland Road in the centre of the town, is scheduled to be finished by next September, at a total cost of £450,000. Architects are Harry S. Fairbairn and Son.

## Two jobs in Australia

TWO contracts together worth £2.1m. for projects in Sydney just received by Costain (Australia) Pty. include a nine-storey office building for Macquarie Properties Pty.

Designed by Peddie Thorp and Partners with Ove Arup and Partners as consulting engineers, the office block is located in Sussex Street, Sydney. Work has just begun for completion in 53 weeks.

At Castle Hill, Sydney, the company is to build a five-storey residential block for Church of England Retirement Villages. The £580,000 building designed by architects Noel-Bell-Ridley Smith also with Ove Arup as consulting engineers, is to be finished within a year.

## Assessing the results

TO enable it to assess more accurately the financial response to its various fund raising efforts, Shelter, the national campaign for the homeless, is now using Waste Computer Services.

Shelter constantly needs to analyse the response from different sections of the public to its appeals in order to obtain the best results from its expenditure. Of the four services examined, Weter's was considered the best overall package at the lowest cost.

The service will enable the charity to analyse general income resulting from intensive area publicity; distribution systems for Christmas cards; recording of local housing associations costs and rent structures.

In the past Shelter was only using computers as giant adding machines, but now its flexible system controls its 80,000 mailing list for the Shelter newspaper.

## IN BRIEF

● PART of a redeveloped scheme on an existing building shell situated between Liscard Road and Cherry Square, Wallasey, includes construction of all internal partitions, decorations to walls, floors and ceilings, plumbing, heating, ventilation and electrical services.

The work for Littlewoods Mail Order Stores, is to be completed in five months, and the £185,000 contract has been awarded to Sir

Alfred McAlpine and Sons.

● FINAL stage of the £5m. Meriton Centre scheme in Leeds for Town Centre Securities, is due to be completed in 1972 by John Mowlem and Co. under a contract worth £2.25m. A 10-storey air-conditioned office block of 150,000 square feet floor area, a 45,000 square feet department store with ground level car park, in five months, and two public houses are to be built.

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## Footbridge links shops and car park

TO SPAN one of Bristol's busiest roads, a 120-ft. long Tubewright footbridge was yesterday erected by Linsamite to form a link between the city's Broadmead shopping centre and car parks on the other side of Bond Street.

The bridge, designed by Eritish Steel Corporation's Tubex Division, comprises tubular rectangular hollow sections.

The sections, including ramps were built and tested in the company's works at Avonmouth. Even the anti-slip compound which provides the walking surface was laid and hardened in the factory.

## Rubber covered tile

A DUTCH company is marketing a concrete tile which is entirely jacketed in rubber. Sixteen air cushions are arranged between the concrete and rubber, giving the jacketed slab considerable resilience. The tiles have a high insulation and absorption capacity, and are sound-insulating.

The concrete tile is 43 mm high, and the attached rubber jacket 27 mm. It is 300 mm long and 300 mm wide. The tiles can be supplied with or without bevelled edges and in various colours—red, blue, green, white, grey and black. All except the black are electrically insulated.

The tile is suitable for use in staircase wells, kitchens, hospitals, old people's homes, playgrounds, swimming pools, gymnasiums and workshops. The tile can be delivered without the concrete base and serve as a

rubber tile for covering existing floors.

The maker is N.V. Hollandse Basaltine, Tegelfabriek, Merwedestraat 40, Dordrecht, Holland.

## Sticks to moist concrete

TERCOL has developed a special epoxy adhesive bonding agent to eliminate the "moisture factor" delay on all floor-laying contracts.

The new resin-based material which sets to form a high compressive strength, watertight and bacteria-proof impermeable film—will effectively bond tiles and vinyl sheet to damp concrete floors still too moist to accept a standard adhesive.

Cured resin film is unaffected by most inorganic and organic acids, alkalis and oils at ambient temperatures and ideal for hospital and laboratory use as the bond strength of the material cannot be weakened at the joints by frequent spillage of these chemicals.

Vitreous can be readily applied to timber and cementitious floors provided they are structurally sound and the timber is braced to eliminate the possibility of "springing" at the joints. All backed pvc, vinyl, lino tiles and sheets can be laid including those with felt or cork backing.

Meanwhile, Ripolin's liquid plastic roofing system, Aquagard, has been specified on the barrel vault roof sections of walkway areas connecting the buildings and blocks at Berbican, in London. Sheet material was not entirely suitable and as the latter would be smaller than whole surface visible from surrounding buildings the use of a black coating was not considered. Aquagard was chosen because it is flexible, elastic, seamless and available in a range of colours.

## U.K.'s biggest truck crane Fram gets variety of work

CAPABLE of handling loads of up to 170 tons and available in both strut jib and tower configurations, the Colossus, says the maker, is the biggest truck-mounted crane in the U.K.

The Colossus, introduced by Coles Cranes, Eastcote, Pinner, Middlesex, incorporates new design concepts, including fluid balanced suspension; independent control of all diesel electric crane motions; and a 14 x eight-wheel drive, with 10 steered wheels. For road travel the diesel-powered truck can reach 35 mph, while for site travel with full length jib the transmission incorporates an hydraulic drive allowing speeds of 0 to 0.5 mph.

The 170 ton load is handled by the basic jib (49 feet 2 inches) at 15 foot radius. Using maximum extension sections and a fly jib provides a total combination length of 396 feet

capable of handling 6.25 tons at 90 foot radius.

The basic tower configuration consists of a 110-foot pin-to-pin tower with a luffing boom, and the maximum load of 50 tons can be lifted at a 30 foot radius. From a choice of five tower heights and six boom lengths, a wide range of configurations can be erected. Using the maximum tower height of 208 feet 4 inches, with the maximum boom length of 187 feet, a 9.5 ton load can be lifted at a radius of 60 feet to a height of 387 feet.

The Colossus crane can lift from the ground all jib lengths and tower configurations unaided.

In travelling order, basic overall length is 59 feet 11 inches, height is 13 feet and width 12 feet. Turning radius is 46 feet, and gradients of one-in-three can be climbed. Working order weight is 157 tons and travelling weight is 83 tons.

WORK valued at £400,000 has been won by members of the Fram Group, V.C.C. of Egham, Surrey, to undertake the Nayland Sewage Works Extension and Leavenworth Sewerage for the Melford Rural District Council at Sudbury, Suffolk, under a £216,382 order. The consulting engineers are Sandford Fawcett and Bell.

Fram Gerrard is building a cash and carry warehouse at Swinton for Morris and David Jones at a cost of £100,000. Work on site has already begun and completion is scheduled for February next year. The scheme will provide about 43,500 square feet of warehouse and office accommodation with extensive car parking adjacent.

Fram Lendecapes is constructing two playing fields for the Bury Corporation, three playing fields for the Lancashire County Council and a sports complex for the Winsford Urban District Council for a total of £90,000.

## Devon reservoir site

THE FINAL choice of site for the reservoir to meet the water needs of South West Devon up to the year 2001 is expected to be made towards the end of next January.

Four sites in the Devon River Authority area are on the short list of five being investigated by Sir William Halcrow and Partners, consulting engineers. The fifth possibility involves taking water from a proposed reservoir at Bideford on the River Plym, now under investigation by the Cornwall River Authority for supplying the Plymouth area.

The storage capacity of the reservoir envisaged would be between about 1,500 and 2,000 million gallons, capable of giving an average annual yield of about 8.1 mgd. The consulting engineers are likely to recommend detailed site investigations of one or two dam sites following their report.

The four sites on the short list are Bellever, Woodcourt, Farnworthy and Swincombe. The latter would be smaller than that rejected by Parliament earlier this year.

In June this year Mr. Eldon Griffiths, Parliamentary Under-Secretary, Department of the Environment, visited parts of Devon and Cornwall to report on

## NatWest extends Kegworth

SINCE National Westminster Bank acquired the Kegworth computer centre near Nottingham from Systems International earlier this year, the bank has been building it up as its main computer complex outside London.

An extension to the centre is to be built under a £1m. order awarded to Gilbert Ash. A steel framed building clad in pre-cast concrete will house a new water-cooled computer requiring sophisticated temperature and humidity control equipment.

In the course of the next 10 years the bank will install up to six large computers to be linked with other big machines at Woolgate House, in London.

## Tarmac gets down to it

FOUR jobs for Department of the Environment projects, together worth £90,000, have been won by the Geotechnical Division of Tarmac Construction.

The South West Road Construction Unit has placed a £48,000 order for soil survey work on the A30 road between Exeter and Okehampton which includes 135 shell and auger holes and 372 rock drillings. At Bridport, Dorset, the RCU has awarded an £18,000 contract for 96 boreholes on A35 road site investigation.

At Healey, Staffs., the division has a £18,000 sub-contract from Holland Hannen & Cubitts (Midlands) for contiguous anchored bored piling to facilitate ground excavation 21 feet below road level for a new telephone exchange. The fourth contract, from the Midland Road Construction Unit, is for taking boreholes in connection with the Bilston Link Trunk Road.

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## BUILDING

## Mood of optimism pervades the industry

By MARTIN ROUTH

A MOOD of optimism is slowly taking a hold on the construction industry which, after three years of depressed activity, now looks as though it should experience an upswing next year.

The total value of work carried out by contractors and direct labour employed by public sector authorities was down in real terms to £4,971m. in 1970, the second successive year in real terms. This figure includes £3,325m. of new work carried out by contractors.

equal to 8.6 per cent of the gross Domestic Product—while the remainder is split fairly evenly between repair and maintenance and work done by public sector direct labour. While the real GDP rose by 7 per cent in 1970, the construction industry suffered a 2 per cent setback in total output at constant prices compared to the year before.

As for this year, there seems to be only a slight hope of improvement. The National Economic Development Committee for Building and Civil Engineering expects the figure to be virtually unchanged. On the other hand, a state of trade enquiry conducted by the national Federation of Building Trades Employers last month showed that 43 per cent of members thought they would do more work this year than last, whereas only 25 per cent expected to do less.

Confidence in the future, however, is endorsed by the line of all orders placed with contractors during the first half of this year which stood some per cent higher at constant

prices than for the same period of 1970. Certainly the private house building market is currently enjoying a most welcome recovery.

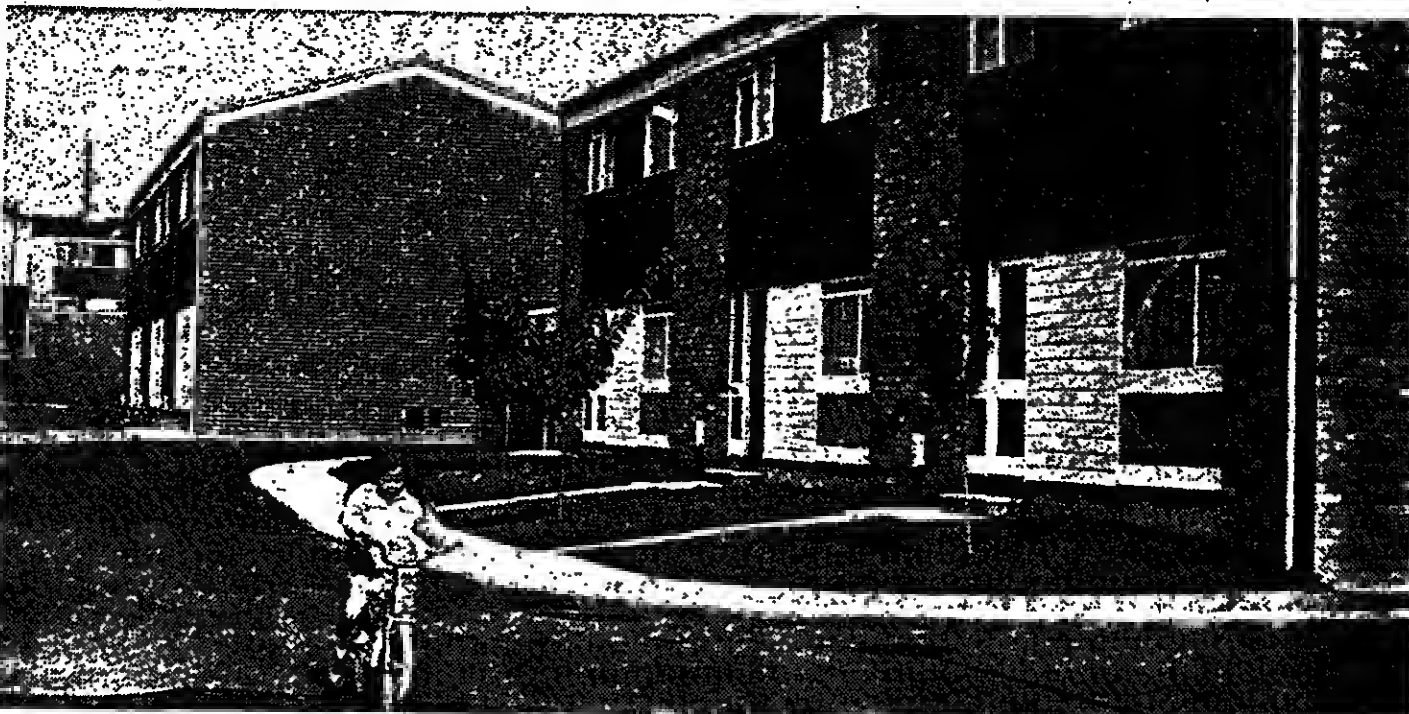
The figure for new private sector house building orders for the first six months of the year was almost 10 per cent higher than for the corresponding period last year. Indeed, the number of private houses started in September was the second highest ever recorded in one month.

## Land shortage

However, grave concern exists as to whether this recovery can persist much longer in view of the anticipated crucial shortage of development land particularly in the South East. What is more, the public sector's share of housing continues to decline. The extent of this fall has been put at 11.5 per cent, which to all intents and purposes disposes of the gains in the private sector. On this point, the industry's Little Noddy expects total house completions in 1971 to be slightly below last year's figure of 345,000. The prospects for the near future are somewhat bleak as the value of new orders for council housing fell by 20 per cent at constant prices seasonally adjusted for the first half of this year as against last.

But a boost may follow the increases in the Government's housing cost yardstick of up to 11 per cent announced last month by Mr. Julian Amery, Minister for Housing and Construction.

That there is tremendous potential for house building is



Corner of an extensive housing development in Amiens which was British designed and built of British brick.

evident from the fact that an additional 180,000 homes are needed in London alone and local authorities with acute housing problems to receive public money a year by 1976. This Bill is expected to enable local authorities with acute housing problems to receive public money a year by 1976.

Looking now at other sectors of the construction industry, output of private industrial work is expected to be at least 4 per cent down this year. This expectation is based on a Department of Trade and Industry survey into investment inten-

tions which showed a fall of 6.8 per cent in the capital expenditure plans of manufacturing industry.

## Hotel building

This appears to be borne out by the figures for floor area made before the end of March, 1971.

One area to have contributed to a significant step up in private non-industrial output is hotel building. This has been as a result of the Government's grants offered under the Development of Tourism Act, which required starts to be made before the end of March, 1971.

So far as office building is concerned, there appears to be continuing demand if the strong growth in office development permits is anything to go on, and the industry's EDC foresees

a 4.5 per cent growth in this area. School building has been another active area with new orders obtained in the first six months of the year 40 per cent up on last year.

An analysis of the construction industry shows that the number of firms operating in it has been steadily falling; from 92,000 in 1959 to around 75,000 at present, while at the same time the proportion of large companies has been increasing. The workforce, equal to some 6 per cent of the country's employees, has fallen from 1.6m. to 1.5m. These figures reveal more than rationalisation; they point to higher productivity.

To some extent this is attributable to the fact that factory-made components are being increasingly used. The share of overall costs of buildings absorbed by engineering services, for example, is continually rising as user standards improve. As these services, covering such things as lifts, air-conditioning, heating and lighting, become more sophisticated, they comprise more manufactured components, and it is this that contributes to greater productivity for the industry as a whole.

But they also serve to demonstrate the extent to which this industry is still fragmented, and may account to some degree for its rather poor record so far as overall efficiency is concerned.

The number of registered unemployed in the industry for July was 118,000, and if this figure seems lower than might have been expected the discrepancy is accounted for by the

continual drift away to other occupations. What may be surprising, however, particularly in view of the increasing shortage of skilled labour in the South-East, is the 7,000 unfilled vacancies that existed in July for craftsmen registered with the Department of Employment.

The bankruptcies that occur among contractors from time to time highlight the overall lack of profitability experienced. On the issue of fixed price tenders for contracts of less than two years duration, the question being asked is does this policy inhibit or contribute to inflation? Builders' anxiety in this matter is based on the fact that materials prices have been rising by about 1 per cent a month, and in any case overall inflation has been running at almost 10 per cent over the last year.

## Direct labour

Another major area of concern to contractors is the possible effect on them of the value added tax proposed for 1973. They are particularly worried that direct labour building departments of local authorities should not be treated in such a way that private builders are left at a disadvantage.

Any forecast of the construction industry's prospects for more than a year or two ahead is impossible as its fortunes are so closely alinged to those of the economy in general. While an upsurge is confidently predicted in some quarters, particularly in view of the country's EEC commitment, leaders in the industry are hesitant in their predictions.

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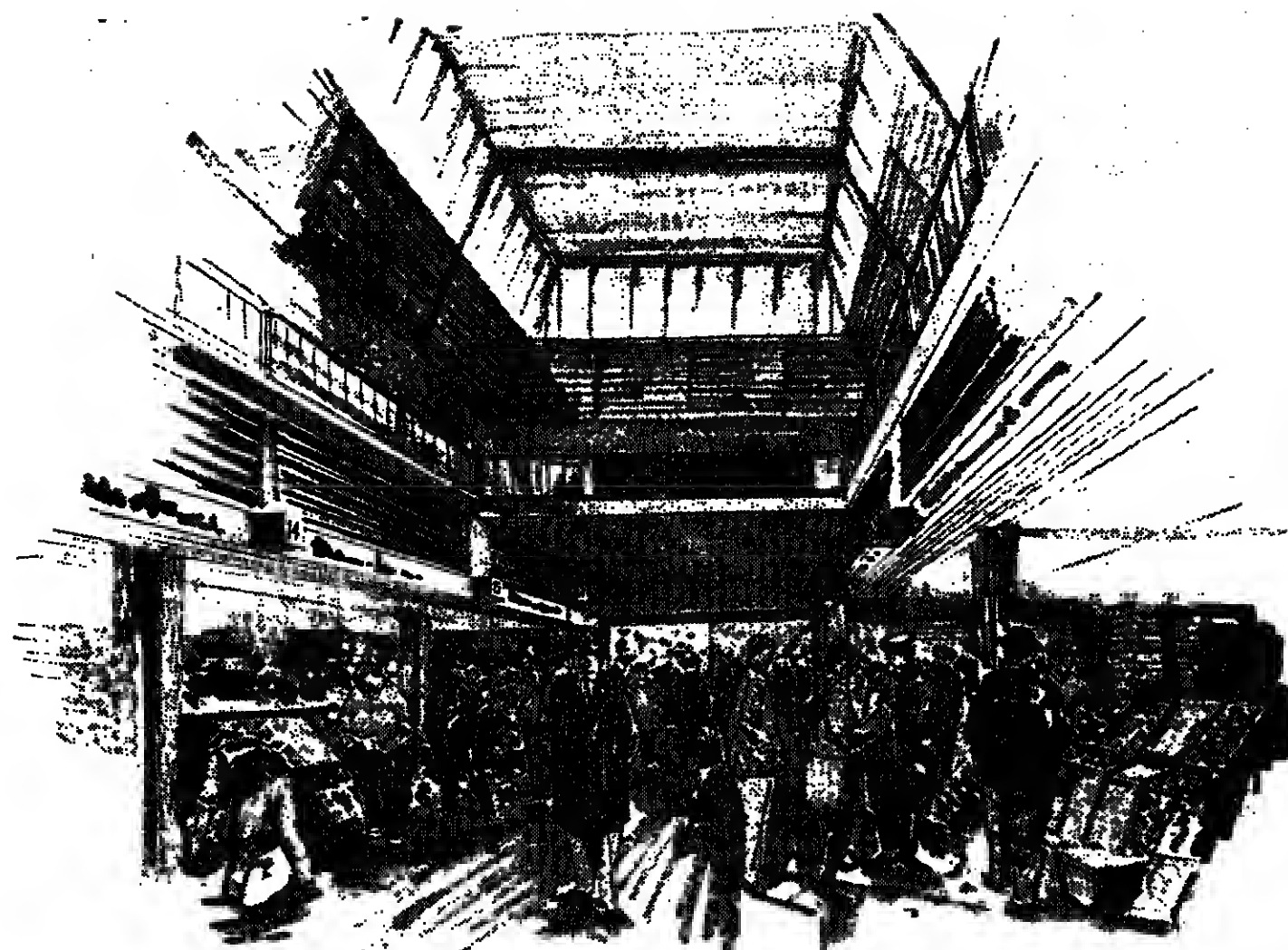
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## BUILDING II

# Changing pattern in housing demands

By STANLEY MORTON, Chairman, National House-Builders Registration Council

It is always difficult to predict the future in housing. At the beginning of the 1980's expert opinion was agreed that 300,000 houses a year was about all that would be needed. In fact average annual output in the 1960's in the U.K. at 380,000 started or 362,000 completed a year has far exceeded this figure. In many areas the shortage of homes has been turned into a surplus. Taking Great Britain as a whole in December 1970 there were 408,000 more dwellings than households. In those circumstances some might expect that the market might now stagnate. Yet, as we all know, the demand for private housing, especially, has never been more buoyant; all the signs suggest that this will this year be in the region of 200,000 in the private sector while the public sector starts may be about 150,000.

How long will the boom last? We commissioned Professor Parry Lewis to give us a review of the various housing forecasts. The table shows what the experts predict.

My personal belief is that in the next 10 years the emphasis should be and probably will be, more and more on the private sector. Already we have over 5m. council houses, far more publicly owned houses than in any other democratic country. Already 150,000 of these council houses become vacant each year because of deaths and because of other people moving out to buy their own homes. This tendency will, I believe, increase and I think it very probable that by the mid 1970s there will be over 200,000 council houses falling vacant each year.

### Low incomes

Even if not another council house were now built, there will be many places where it will be difficult for local authorities to find tenants at fair rents. Those who will want to move into council houses will be those with low incomes who will benefit from the rent rebate schemes. This is right and proper. There should be hous-

ing provision for the needy but I doubt very much if there are over 5m. families in this category.

It is worth recalling what Richard Crossman, Minister of Housing, said in 1965: "If the provision of subsidised council housing is a social necessity forced on us by the technological development of the modern conurbation, the provision of houses for sale, to the potential owner occupier, is a response to deep call of human nature. The extension of our

whereas renting means paying for ever without anything to show for it.

### Renting market

Of course there will always be a place for a renting market for those who have to move every year or two or who, for some reason or another, do not wish to own. But even if our political climate should change I think the economic advantages of ownership are so great that the percentage of those willing

HOUSING DEMAND		TABLE OF COMPARATIVE FORECASTS				REMARKS
AUTHOR	1971	1972	1973	1974	1975-76	
Parry Lewis	230,000	370,000	387,000	Then a drop until the late 1970s.		Assuming 5 per cent. vacancy rate in later years. Figures taken July-June.
Richardson & Vipond		Estimated Annual Average Programme 310,000				Forecast made of overall ten-year picture of what the position may be at end of decade. Figure forecasted—1,500,000.
Holmans	A—372,000 B—372,000				355,000 402,000	A—Low slump clearance 100,000 p.a. B—High slump clearance of 150,000 p.a. after 1971. Figures based on five year assumptions.
W. Greenwell	360,000	375,000	385,000	400,000		(Figures for Great Britain)

council housing programme is exceptional; it is born partly of a short-term necessity, partly of the special conditions inherent in modern urban life, whereas the building for owner occupation is normal; it reflects a long-term social advance which will gradually pervade every region of the country."

I do not think that anyone could express better the direction in which our housing policies should move in our cities as well as in the suburbs. Owner-occupation has every attraction. It is what most people want. It promotes saving. It gives the individual a stake in society. It encourages him to do his own maintenance. It helps the Exchequer because the individual is willing to pay a bigger percentage of the real cost of his housing if he owns rather than rents. This is natural because ownership is a good investment in the long run

to rent privately at an economic rent is likely to remain small. Because rented property has to be maintained and management charges have to be met, the annual cost of renting is almost as great as that of buying even if the renter were given similar tax advantages. In December 1970, 14.9 per cent of all dwellings were privately rented and this percentage is falling rapidly each year. If we are realistic I think we must expect this decline to continue.

In 1980, on present trends, it looks as though home ownership could be between 55 and 60 per cent, with council housing 25 to 30 per cent and with other forms of private renting housing societies and tied houses perhaps 10 to 15 per cent.

What are the likely trends for standards? In the 1960s we have seen improvements in the layout of estates and in the design of houses. Far more have central heating; far more

then our new houses could be come larger as well as better and yet still be built at a price which people could afford to pay. In the U.S. the average new home is nearly 1,300 square feet while our average is probably under 850 square feet. We fall in this then I fear the family houses will remain smaller than would be ideal with less land. We will, however, need more one and two bedroom houses; there will be an increasing demand for houses in both public and private sectors built for old people, for single people, and as well end retreats for the city worker.

Lastly, will there be a technological revolution? I do not believe so. I have lived through too many "House built in 12 hours" and "£1,000 house opening ceremonies. But there for standards? In the 1960s will be continuing technological evolution and it seems highly probable that the 1980 house will be warmer and better equipped than that of 1970.

## Better grants emphasise benefits of improvements

By MICHAEL CASSELL

In the continuous debate on the required levels of new house construction in this country it is often forgotten that much can be done to improve the housing stock situation without a single additional home being built. The problem is as much one of improvement and modernisation as one of new development.

There is little doubt that more has been done in the last three years to stimulate improvement of existing houses than at any previous time. Grants have, in fact, been available for home improvement work since 1949, but rarely was the fact sufficiently publicised by local authorities or made use of by the public. All that has certainly changed since the Housing Act, 1969, and the improvement grants system is currently experiencing a success which could have major repercussions on the nation's housing situation.

Until 1969, the maximum amount made available by a local authority for improvement work was £400. To-day, a more realistic figure of £1,000 exists, unless the owner-occupier or landlord lives in a development or intermediate area where the amount is extended to £1,500. In both cases, the grant is normally half the cost of the modernisation work undertaken.

There are three types of grant available. First, there is the discretionary grant which can be used for improvements to a high standard and for providing additional accommodation by conversion. The effect of the campaign so far is clear to see. In 1969, 109,000 grants were given but by 1970 the figure had risen to 157,000, by far the best total on record at that time. By September of this year, however, the level of grants was running 20 per cent above the 1970 figure. Up until 1969, the standard grants found most favour with the public but since then the discretionary grant has become the most popular.

Neither has the construction industry itself been slow to appreciate the advantages, in terms of additional workload, that a more attractive grants system is providing. The National Federation of Building Trades Employers has reported considerably increased levels of house improvement activity in some regions, particularly the north, and is anxious to see even greater co-operation between local authorities and its own

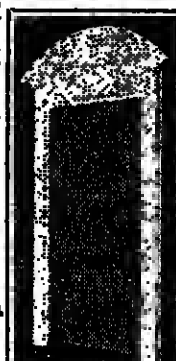
members to ensure a continuing and greater acceptance of the grant scheme on a nationwide basis.

As a further boost to improvement work, the Federation now operates a scheme in co-operation with Forward Trust which provides finance for those customers wanting modernisation work carried out, but who are unable to qualify for local authority grants.

A less traditional role for the local authorities is in the establishment of general improvement areas whereby the living standards of a whole, predominantly residential, area are raised. A GIA is declared and the local council institutes a slon in future and help maintain the process of modernisation and environmental improvement which is becoming increasingly important.

### Pioneer approach

As with improvement grant some authorities adopt a pioneering approach. Others, but the undoubtedly benefits of both schemes should ensure their continued expansion in future and help maintain the process of modernisation and environmental improvement which is becoming increasingly important.



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## BUILDING III

## Industry unlikely to increase demand

HAROLD BOLTER, Industrial Correspondent

New industries in the U.K. in Britain, the overwhelming impression is that most companies have decided that they must cut back expenditure next year even below the low levels of 1971.

This is reflected in the latest industrial development certificate returns from the Department of Trade and Industry, which show that the number of IDC's granted for projects of over 10,000 square feet in the first nine months of this year was the lowest since 1967.

In the July-September quarter certificates approved for projects in excess of 10,000 square feet represented a total floor area of 15.1m. square feet. By contrast, in the third quarter of last year they covered 22m. square feet—and 1970 was not a good year for builders active in the industrial sector.

Overall, certificates granted in the first nine months of this year represented 48.2m. square feet of floorspace, some 20m. square feet less than between January and September, 1970. The total for the 12 months to the end of this September came to 68.8m. square feet, compared with 92.3m. square feet in the preceding 12 months.

These are disturbing figures and, naturally enough, the IDC policy has come under renewed attack recently. It has been criticised as a deterrent to growth, even the expansion which it is designed to promote in development and intermediate areas.

Birmingham and the West Midlands have been complaining for some time that the IDC control mechanism has prevented the region from maintaining the diversified industrial structure, with new industries consistently replacing old, which has been its traditional strength. Unemployment figures showing the number of people out of work in the region tend to support this contention.

## High unemployment

Another critic is the Royal Town Planning Institute, which maintains that it is a naive assumption to believe that if economic growth is stifled in one area it will blossom in some other part of the country. The Institute argues that areas of underemployment can only really be rejuvenated by implanting from areas with surplus jobs. This, in turn, means that the stronger regions must be kept fertilised with new growth so that there is something to give off. Where the operation of a strict IDC policy prevents new economic growth from taking place it becomes a self-destructive policy, the Institute maintains, leading to economic distortion and discouraging mobility of labour.

Unfortunately, although there is much in this line of argument, the Government is not likely to be persuaded to move away from a policy of persuading industries into the less-developed areas at a time of high unemployment in

those areas. It would be unrealistic to expect any changes in direction.

In any case, the end of the IDC policy would not lead to a dramatic revival of construction activity in itself. The best that can be said is that it would help to create the sort of atmosphere in which companies begin to think in terms of expansion—and that, as the Government has found despite an expansion Budget and subsequent measures, is difficult to achieve.

The Government is well aware of the dangers of a continuing low level of capital expenditure on new plant and buildings and has tried to stimulate growth. The best hope for the construction industry is that now Britain's entry into the Common Market seems assured industry will begin to plan for expansion again, although uncertainties in the currency field could well continue to inhibit their enthusiasm for increasing manufacturing capacity.

There is nothing in the statistics to suggest that confidence is returning.

Returns on the value of new orders obtained by contractors for private sector industrial work suggest that this business is running at an annual rate of some £470m. in 1971, almost £100m. less than the total for 1970. No real resurgence of activity can be expected over the next 12 months.

## System building becomes part of everyday life

JOHN M. GILLHAM,

Chairman, System Builders' Section, National Federation of Building Trades Employers

Building costs in Britain have rocketed at the rate of 10 per cent per month. This is the result of increased labour costs, which have leapt over the past ten years. Just basic wage rates and salaries, but increased pay in respect of unemployment, sickness and pension costs; holidays with pay, and redundancy payments, coupled with a full "guaranteed week" of the event of inclement weather. These increased labour costs, of course, not only apply to construction labour but also to manufacturing key materials such as cement, bricks, steel reinforcement, which are key ingredients for any building.

It stands to reason that the form of construction, call it "industrialised" or "system" building, which save on site labour and reduce time must become increasingly more competitive with traditional methods of construction. As many leading people in the British building industry argue, in my submission, the "system" building, which is something special. On the contrary, the use of factory precision-dimensioned components, erected by highly trained groups of men, aided by sophisticated machinery, to construct programmes carefully and speedily executed, coming part of everyday life rather than the exception.

Industrialised building has had 1 fortune in Britain over the last 25 years since the end of World War II. The housing field, the aim to build 40 per cent of authority housing (around 30 per annum) using industrialised methods, but alas, less than 10 per cent. This figure was never reached, the best year being 1968 when 50,342 dwellings were completed using industrialised building techniques, using their

## Public education

On the school front, many national contractors developed first-class systems immediately after the war, making an invaluable contribution to the accelerated school-building programme. However, subsequently various "public consortia" systems such as CLASP, SCOLA and SEAC were developed, by a consortia of public education authorities, pooling design resources and producing standardised structural steel or concrete systems, accommodating secondary components. The result was that by the end of the 'sixties, although some 40 per cent of the schools in the United Kingdom were constructed using system methods, only about one-fifth of these, some 8 per cent, were using well-tried and proven "private systems" developed, marketed and promoted by private enterprise contractors. Notable private systems being "Intergrid," by Gilbert-Asb Ltd., "Laing span" by John Laing Construction Ltd., together with excellent systems by Derwent, Lesser, Medway, Anderson and the Simms CDA.

On the hospitals side, some seven years ago, to carry out, on a negotiated basis, major hospital projects, using their

own systems. All were highly successful but, alas, the lessons learned were never exploited with continuity contracts for the whole design/build teams. On the defence building side, a £9m. Barracks scheme was built at Aldershot, using a heavy-duty large panel system for the living accommodation, and a prestressed, precast concrete framed system for the administration, recreational and training buildings. The scheme was remarkably successful, achieving over twice the national average productivity per man year for traditional building, and received both a Civic Trust (for architectural merit) and a Concrete Society award. Thus illustrating the point I have always contended that "system" or "industrialised" building does not mean monotonous building, if designers would only give the same imaginative, creative thought to their "system" buildings as they do to their traditional ones.

At the time of writing, I am pleased to report an upsurge in industrialised building in the United Kingdom—not only in the public but also in the private sector.

Following the publication of a productivity study on two-storey housing by the NBS showing that productivity on IB sites is 70 per cent above the level for all public sector housing, requiring only 50 per cent of the site labour required for traditional methods of construction, coupled with the publication of Ministry of Housing cost statistics showing a decided cost and time advantage for industrialised built low and high rise dwellings, the number of system house tenders accepted for the first quarter of 1971 showed a considerable increase over last year, accounting for 33 per cent of all public sector dwellings approved by local authorities.

## Standard components

With the change to metric and public consortia and private system schools designed to the same preferred dimensions, it is hoped that in the future private structural systems will, once again, obtain a larger share of the market. Education Authorities will be able to select the structural system most appropriate for the particular project, but still enjoy the benefits of inter-changeability of mass-produced standardised secondary components such as windows, doors, partitions and fittings.

Much work is also being done in the rationalisation of common performance standards for mechanical and electrical services in schools, which after speedily executed, it should be all, form an important sizeable element of the total cost of a school.

Recently, the System Builders' Section of the National Federation of Building Trades Em-

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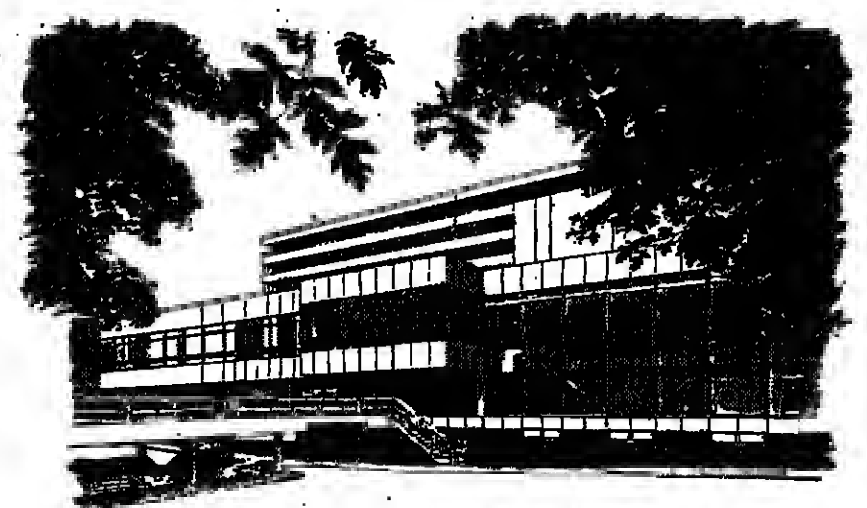
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## BUILDING IV

# Healthy prospects for big firms

By BARRY RILEY

It has been a quiet year for mergers in the construction industry. Although there has been a trickle of medium-sized deals in the building and building materials sectors — like Thomas Tilling's £2.8m. bid for Pilkington's Tiles, and Ready Mixed Concrete's £3.6m. purchase of Berk's interest in St. Albans Sand and Gravel — the big take-overs have been missing.

One reason is possibly the uncertain trend of the industry earlier in the year; the direction of profits was doubtful, and share prices were generally not high enough to provide the right springboard for bids and deals. Moreover the take-over specialists often had their attentions elsewhere: Trafalgar House has been digesting the acquisition of Cunard, and Bovis has been tying up deals in Canada and arranging a rights issue.

## Share prices

Within the past month or so, however, the firm trend of share prices and profits appears to have begun to stimulate a rise in take-over activity. Thus Tarmac stepped in for the troubled Limer Holdings, and stimulated by the intervention of Trafalgar House pushed up its price to £5m. Bovis came out with agreed terms worth £8.6m. for Page-Johnson Builders, reckoning roughly to double its stake in the booming U.K. estate development sector. Viewed from the stock market, this has been a year of substantial recovery. By the beginning of this month the FT Actuaries indices for Contracting and Building Materials were both showing gains of some 60 per cent. compared with the end of 1970, a performance about twice as good as that of the all-share index.

In fact experience in the industry has been patchy, but the overall picture has been influenced by several powerful factors. To start with, the tremendous upsurge in the private housing market, contrasting with the period of considerable depression which came before, has had widespread repercussions on the building materials suppliers. The leap in hotel construction has played a part too. Demand for everything from bricks on the one hand to central heating boilers on the other has roared ahead. In the first half of the year deliveries by London Brick increased by as much as a fifth, and profits before tax were £3.03m. against £3.96m. in the whole of 1970. In its third quarter, May-July, Marley

earned £1.92m. pre-tax, nearly as much as its £2.30m. in the full year 1969-70.

The ending of the price controls set up by the Labour Government has also played a major role. Deliveries of cement, for instance, have not been especially buoyant but hefty price increases put through over the last 18 months have permitted a big recovery in profits. The weather should not be ignored, either — a very mild winter has been followed by a predominantly dry summer and autumn, which is always an effective influence in keeping costs down and profits up.

Good weather has been important for roadbuilders, and this sector has also been the beneficiary of an active phase in the trunk road programme as work has continued fast towards the target of the first 1,000 miles of motorways. Those in the right places have done well: among the civil engineers W. and C. French, for example, while among the suppliers of aggregates Amey Group raised profits from £0.48m. to £1.19m. before tax in the first half.

So much for the bull points. There have, needless to say, been some important factors working the other way, and of these perhaps the most widespread — cropping up in practically every major company statement — has been the problem of

fixed price contracts in the public sector. The Government, together with other public authorities, has resolutely opposed attempts by the construction industry to write variable price clauses into contracts of less than two years. So the price and cost explosion of 1970 and the early part of this year has made mincemeat of the profit margins built into contracts being worked on in the recent past, and at present.

## Rate of inflation

There are signs, however, that the worst of this problem may now have been seen. For the last year or so the industry has been allowing in its tenders for a much higher rate of inflation. As the older contracts are completed the higher profitability on newer business will show through more and more.

In the public sector the fixed price headache has been compounded by the weak demand for housing, more particularly for high rise types — which have been going rapidly out of favour — and various kinds of industrialised building systems. The combined effect on George Wimpey was sharp on one stage — in the six months to last March the group's pre-tax profits fell by 40 per cent. Another prominent victim of hard times in this sector has been Concrete, the "Bison" group which rose to

prominence on the back of the high rise housing fashion: profits here fell 17 per cent. to just over £1m. in 1970-71.

Yet Wimpey has bounced back in creditable style, with a slight earnings improvement in the half year to June; for a group building over 9,000 units a year in what is at present a highly profitable U.K. private housing market this is, perhaps, not surprising.

It remains to be seen whether the high profits of some areas of the building industry will percolate through to the remaining dull spots; in contrast to Amey Group, for example, Hovringham Gravel (in a much less favoured area) has only shown modest results so far, despite the good weather factor.

Still, the broadly based industry giants are looking healthy. Thus Taylor Woodrow is hopeful of maintaining its steady upward trend and John Laing — just moving out of its long phase of recovery towards real growth — pushed profits nearly 50 per cent. higher to £1.56m. pre-tax in the first half of the year. For the same period Tarmac was also well up, by some 16 per cent. excluding acquisitions. And though Marchiel has been quiet about prospects, it is fair to assume that its big stake in the U.K. roadbuilding programme is standing it in good stead.

# Safety: waiting for Robens

By KEN GOFTON

Overshadowing any debate on accident prevention in the construction industry — or indeed any other industry — at the present time is the Robens Committee on Safety and Health at Work. A considerable volume of evidence has now been placed before the committee, and although the publication date for the report is not yet known, its findings are eagerly awaited by those directly involved in accident prevention. One authority in the construction industry said that the inquiry represented the best opportunity in 100 years in influence legislation.

Several employers' organisations

are involved in what is loosely known as the construction industry. They include the building trades employers, civil engineering contractors, engineering employers, and the electrical, heating and ventilating, asphalt, and oil and chemical plant contractors, and they have submitted written evidence jointly.

Although that evidence has not been made public, one can make a fairly accurate guess at the points which the industry's employers would want to get over. For example, although construction is grouped with manufacturing under the jurisdiction of the Factories Acts, it is strongly felt by many that the conditions are entirely different. Accident prevention on a building site is complicated by the fact that the physical shape of the site and the work being done change from day to day; weather conditions can have an important bearing on safety; and the number of sub-contractors can make overall supervision difficult. It is not suggested that there should be no legislation governing working conditions in the construction industry, but the official view of the employers' associations is that the present law is too cumbersome and difficult to interpret. A separate Act and Regulations are required for construction, it is argued, and these should be backed up by an industry-devised Code of Conduct, rigorous training programmes, and a greater reliance on the common law responsibility of the individual.

## Accident record

How much sympathy the Robens Committee will have for this point of view is difficult to assess. In spite of much good work done by individual companies, the industry's accident prevention record as a whole compares badly with that of manufacturing industry — largely because of the difficult working conditions referred to earlier. If it can be shown that existing legislation is positively hindering efforts to improve the industry's performance, then the case might be accepted. But the sole criterion must be to devise the most effective legal framework for minimising accidents. Against that, a feeling of being hemmed in by too many petty regulations is a small price to pay if it geologically means fewer employees being injured.

The industry is also critical of the present system of assessing blame for an accident when it comes to the allocation of compensation. This has the effect of making more difficult any investigation into the cause of an accident, because management and employees withhold information in an attempt to safeguard their own interests. Although anything which divides management and employees on accident prevention is to be regretted it poses again a major question: whether the problem is so important that it

merits upsetting the present system of compensation through the Courts.

Statistics present another source of irritation, particularly to the construction industry (which is frequently shown up in a bad light), but also to industry at large. The problem really is recording minor accidents resulting in a few days off work. These figures have some importance to government departments concerned with the payment of benefits, but few now regard them as an accurate measure of the number of accidents occurring — it is claimed they are distorted by people taking a few days off.

## 203 fatalities

More accurate, since there is no arguing about it, is the number of fatalities which have occurred. In the construction industry, some improvement was recorded last year, with the number of fatal accidents down to 203, against 265 in 1969 and 238 in 1968. Yet in 1967 there were only 197 fatalities. Related to the number of people employed, there were 19.9 fatalities per 100,000 employed in construction in 1970, compared with 23.8 in 1969, 20.5 in 1968, and 18.5 in 1967.

One piece of legislation which appears to have been pigeon-holed for the time being was the Labour Government's proposal for compulsory joint consultation on accident prevention. This was resisted by the construction industry employers on the grounds that accident prevention on a building site is a complex issue which calls for special training. The employers objected to their employees being given authority on safety matters without adequate training. "But we would do anything we could to encourage voluntary consultation," said a spokesman for the NFBTE. Although the Conservative Government shows an inclination at present to revive the idea, there is no guarantee that it will not be resurrected by a future Labour Government.

These are perhaps some of the more interesting debating points in the industry at the moment. On the practical side, there are at least a couple of developments which have been carried out centrally that are worth recording. One is the completion of the industry's detailed Safety Manual, which retails at £5 plus a further £5 for an amendment service. Sales have "far exceeded expectations," and the manual has even been adopted by the Royal Engineers. It replaces the confusing mass of literature from many sources with which building companies were regularly bombarded.

The second interesting development is the provision of four mobile units by the NFBTE which can visit building sites and are equipped to give film shows and lectures to 24 people at a time. Thirteen different subjects are covered in the programme of lectures offered.

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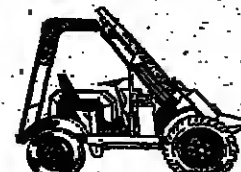
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# Site labour and the new legislation

by JOHN ELLIOTT, Labour Editor

The coming year could well prove significant for the development of building industry labour relations as construction settles down within the new industrial relations framework as union rivalries polarise around the Transport and General Workers and the Amalgamated Society of Woodworkers, Painters and Builders, and as employers face up to a massive national wage claim.

As in all other industries, it is as yet too soon to predict with any degree of confidence exactly how the new labour legislation will affect day-to-day labour relations. It is even more difficult to try to do this in the building industry because of the way it is organised. And in any case, any changes in the TUC's policy of non-co-operation with the Act will affect developments. But despite this, three parts of the Act look as if they are likely to have an impact on building sites. The first is the outlawing of closed shops and the replacement with agency shops. The second is the possibility of friction developing over the use of the new bargaining unit procedures. The third is the need for management to tighten up their dismissal procedures so that they do not fall through inefficient organisation, of the Act's new fair dismissal provisions.

## Local traditions

At present closed shops of varying degrees of formality exist in the building industry, the more formal being in Scotland, the north and the east. Although the degree of unionism, say on Tyneside, slipped for some unions well below the 95 per cent which it was estimated ten years ago, even though closed shop arrangements have tended to be proportionately less common, local traditions have been maintained and on many sites arrangements are in existence which will be unlawful in the future.

This is because of the Act's

provision of a statutory right not to belong to a union as well as a right to belong to a union of one's choice. It follows from this that all closed shop arrangements will be unlawful and the Act rubs this in by specifically declaring pre-entry arrangements void, leaving post-entry shops to be covered by the right not to belong. It also outlaws informal arrangements where a union in effect operates a closed shop, for example where it has a dominant say in who should be employed.

But this does not mean that all closed shops must be eliminated on the day next February or March that these provisions are brought into force. There is nothing to stop employers continuing to operate the arrangements providing they are prepared to pay compensation in the Industrial Tribunals on the unfair dismissal scale up to £4,160. And a pre-entry closed shop will not be regarded as void until it has been declared so by the National Industrial Relations Court at the request of a man who felt he was being discriminated against by being refused employment.

But in some industries, employers are contemplating writing to their unions stating that because of these provisions such arrangements must end. However, in construction, the most likely trend seems to be for employers and unions to continue their old habits, if in a more cautious and circumspect fashion.

The new alternative introduced by the Act (apart from the special approved closed shop for use in special circumstances like the entertainment industry where Actors' Equity needs total control) is the agency shop. This gives an employee three choices once he has been employed. Either he joins the union, or he pays it an agency fee without joining, or he establishes conscientious objection and pays a donation to a charity.

How far this sort of shop is applicable in the construction industry is open to debate. Obviously it would be useful in a

factory situation—say a joinery shop or pre-cast concrete factory—where there was a stable labour force. It might also be useful on sites if it could be arranged at company level because it is estimated that about half the building industry's workforce stays with one employer for about five years. But at site level with a more rapidly changing workforce it might be better for a union to try to build up a strong "voluntary" arrangement rather than bother with an agency shop.

But in any case, all this is fairly academic at the moment because of the TUC's anti-Act policy which first debars registration and secondly says unions must not go to the NIRC to use its provisions. Non-registered unions cannot effectively negotiate an agency shop because it would not have statutory protection. There would therefore be no method of forcing an employee either to join a union or to pay the agency fee.

Even though Mr. Jack Jones' TGWU is showing itself loath to de-register quickly, it should not be assumed that he will defy the TUC—and nor will Mr. George Smith, of the new amalgamation, who is this year's TUC chairman.

## Bargaining units

The possibility of bargaining unit problems is similarly restricted by the TUC policy because non-registered unions interested in invading the industry—or the established unions interested in attacking each other—would not be able to appeal for a statutory unit. Nevertheless, with unions like the construction section of the Amalgamated Union of Engineering Workers moving in on plant operators and Mr. Clive Jenkins' Association of Scientific, Technical and Managerial Staffs wondering whether it can be bothered to tackle the industry's unorganised white-collar staff, a relaxation of the TUC policy could lead to bargaining unit applications.

The third problem from the Act stems from the industry's present loose and informal dismissal arrangements. If a company is to be able adequately to defend itself in the Industrial Tribunals, it will have to ensure that the procedure to be used when a man is dismissed is

properly followed—for example there should be no doubt about who has the responsibility for dismissal, and adequate records of the reasons and circumstances of a dismissal should be kept.

Two other aspects of the Act should also be noted. First, there are the restrictions on strikes and the introduction of new unfair industrial practices. Here developments depend almost entirely on management's attitudes to the value of trying to end a dispute in the courts.

The second is the Act's requirement, backed up by the Code of Industrial Relations Practice, for management to hand over company information to union negotiators. This provision will not be enforced till late next summer. But it seems likely to raise immense problems for contractors who could well be faced with demands from shop stewards negotiating bonus rates for cost information—either through

bills of quantities, operational bills or some other source.

Meanwhile, now that the Building Trade Workers have merged with the Woodworkers and Painters instead of the TGWU, the new amalgamation has to face a difficult period with organisational and financial problems. But the TGWU's ambitions in the building industry have not been stifled just because it lost the builders and a new period of rivalry can soon be expected as the amalgamation attempts to establish itself as a viable industrial union.

This rivalry will colour the wage negotiations leading up to next year's June deadline. The employers seem unlikely to move anywhere near the £20-a-week minimum claim that has been lodged (up from £20) and may well also refuse a cut in the 40-hour working week. The unions could well react to this by bypassing the national negotiations and pressing militantly for local deals in key areas.

on grant payments against levy. And firms with payrolls below £6,000 a year were exempt altogether, with a 20 per cent levy reduction for those with payrolls between £6,000 and £15,000. It is now anticipated that, in fact, the loan should be down to nil by March, 1976, and the Board does feel that, financially, it no longer has any problems of control.

So throughout all these convulsions, training had to take a back seat. It is only now that the committees can take a look at what, and how much, training the industry actually needs, and they are doing just that, in a somewhat pragmatic way. The outcome will undoubtedly prove to be rather mundane. There will be more in the kitty for say, apprentices, and less on the management side. One wonders whether the pendulum may not now be swinging too far in the switch away from the previous practice of paying high grants, particularly for "luxurious" management courses.

Many people were now asking him whether, once the debt was paid off, the CITB would take on a purely advisory role. Mr. Owen, the director, was saying the other day. Such a CITB move would be in keeping with the professions policies of other training boards, some of which plan to do away with the levy-grant system in the relatively near future.

In reply he told the Contractors' luncheon club early last month: "I am personally quite certain that financial controls, which would prevent a training board running into debt, can be maintained on a levy/grant system. So I believe the question that both Government and training boards must answer for the future is: have the levy grant mechanisms operated by the training boards over the past 6 years improved the quantity and quality of training in their industry and have they assisted in spreading the cost of training? And associated with this question in my mind is another equally important one: "Has the levy/grant mechanism been cost effective and equitable?"

He added: "There is little doubt that the answer to the first question is 'YES.' The Training Act got off the ground because training boards could raise a levy and pay a grant. A company which was not already interested in training became interested, either because it would have cost it money if it didn't or because it would be able to make money if it did. There can be no argument with this fact and one of the greatest contributions this has made to the industry is the fact that there are now over 1,000 fully trained competent training officers in the construction industry."

He added: "There is little doubt that the answer to the first question is 'YES.' The Training Act got off the ground because training boards could raise a levy and pay a grant. A company which was not already interested in training became interested, either because it would have cost it money if it didn't or because it would be able to make money if it did. There can be no argument with this fact and one of the greatest contributions this has made to the industry is the fact that there are now over 1,000 fully trained competent training officers in the construction industry."

"This would never have happened without levy and grant, neither would many of the new methods of training craftsmen have been so readily accepted by colleges of further education if they had not been supported by companies who, in turn, were grant-aided."

"Without doubt the real question is 'Have the levy/grant systems used by industrial training boards been cost effective and equitable?' "Personally, I don't think anybody can supply the true answer to this question at pre-training. I hope that the CITB will be able to do some research into providing an answer as it is fundamental to future policies."

"In the CITB's case the answer is 'probably that the levy/grant system has not been cost effective and equitable. But at present this is a subjective judgment which it is not possible to quantify.'"

The real problem was that so little was known about the construction industry, Mr. Owen declared. There was talk about a catastrophic shortage of new entrants for craft training. "And yet there does not appear to be any information available as to the numbers of craftsmen which will be required by the industry in three or four years' time." Neither was there any information available on the effect new technologies were having on the traditional crafts. (In the meantime, the CITB will be paying 70 per cent of its grants this year towards craft and operator training.)

## Sharing the cost

The speed with which the training boards can, with advantage, move towards that coveted advisory role, and do away with their levy and grant systems, must surely depend on the degree of sophistication in the industries they cover. Quite apart from the need for the CITB to collect levies to enable it to repay its debts, it is doubtful whether, without the present stick and carrot lever, many construction firms would in the event come forward to participate, and allow a monitoring scheme to operate. There is another idea which came up at the birth of the training boards, but which has since been largely discredited, and that is the idea of "sharing the cost of training," meaning that those who do not train pay money to those who do. This view is no longer generally fashionable, yet Mr. Owen says that there are still many people in the construction industry who tell him that sharing the cost of training is the only true purpose of a training board. Obviously, the construction industry still has a long way to go.

# Training needs still undefined

By ELSBETH GANGUIN

The first two big training loan had to be negotiated, too, because other borrowing sources had dried up. Other drastic measures followed. Grants payable for training done in 1970-1971 were slashed by half. The Engineering ITB, at once, used the big "stick" to encourage training in the shape of a 2.5 per cent levy on the industry's payroll. The Construction ITB, on the other hand, decided to place its main emphasis on the "carrot"—it promised grants for this, that and the other. This, in a nutshell, became its undoing a few years later.

The open-ended grants scheme became just too expensive. Also, the Board's administrative costs became a bone of contention. Altogether, the CITB expanded too fast—even if this was largely in response to its industry's demands—and, finally, it found itself deeply in debt and at odds with everybody.

So, 18 months ago, a new chairman moved in, followed, in January of this year, by a new director. The ITB's borrowing powers were raised to £16m, because to cover its grant liabilities a £30m cash-flow was needed. (In the event, the £16m was actually never taken up.) And a Government

Each of the committees has sub-committees and working parties. Members represent companies, federations, trade unions and educational establishments, and cover a wide regional cross-section as well. Next, administration costs were reduced. To-day, the CITB staff numbers about 550 less, a drop of around 50 per cent. Area offices were closed and expenditures scrutinised and pruned. Over £1m a year, or 33 per cent, was, in fact, cut out.

## Restructured

Among the complaints directed against the old-style CITB had been one about lack of consultation with the industry. The Board therefore restructured itself into committees, and thus threw the "onus" straight back at the various sections of the industry. The committee members are sitting as the representatives of their sectors, not as individuals—and nobody can complain about lack of consultation now. Each of these four committees decides its own training objectives and its own levy/grant policy. The Board as such only intervenes if a decision by one committee affects the decisions of the others.

And it was the new committees which devised the first "post-crisis"—1971-72—grants scheme. This was in fact the first time that a CITB grant scheme was based on the money actually available to pay for it, but this also meant that the pattern was based on financial, and not on training considerations. Each committee, naturally, took its own view and all tried to recover their sector's debts.

But this procedure also meant that, for the first time, it became possible to indicate what levy rates would have to be applied over two years, and to inform the industry accordingly. A 150 per cent ceiling was set

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## BUILDING VI

## Materials suppliers optimistic

By RICHARD HERMON, Director, National Council of Building Material Producers and the Building Materials Export Group

Materials, components and fittings—materials for short—represent nearly half the cost of construction works in which they are incorporated. Building material producers are thus currently supplying goods to the value of well over £2,000m. to the home construction market, together with over £200m. in direct exports. A wide and diverse range of industries is involved, represented by a considerable number of trade associations and federations, the great majority of which are brought together in matters concerning their collective interests, and representation of these interests, in the National Council of Building Material Producers (BMP), founded in 1942.

The industries producing building materials are generally capital intensive—in many the annual turnover is less than

or about equals the capital employed. In sharp contrast to the contracting side, investment decisions for new plants and for increasing capacity must generally be taken some two or three years ahead. Producers therefore have a particular interest in longer-term and medium-term forecasts and their accuracy. BMP being probably the first body in the construction field to undertake forecasting on a regular basis for the benefit of its members, a function which it has fulfilled for many years. Construction activity has shown a decline, in real terms, since 1968, with consequent underutilisation of capacity and resources. It now seems reasonably certain that this decline will be reversed for 1971, which should show a modest increase in output at constant prices with every sign of a larger one

in 1972, to return, for new works, to about the 1968 level. It must be hoped that real growth will then continue, as foreseen by the long-term assessments of the forecasts working party of the two construction Economic Development Committees which suggest a continued growth to 1979, in real terms, but at rather over half the average rate enjoyed for the decade to 1968. There is nothing to suggest that building material producers will not meet the demands likely to be put upon them. Sudden surges can, however, occasionally cause temporary difficulties, primarily of a specific or local nature.

## Repair market

The repair and maintenance market is an important one for material producers—one which is understated in official

statistics because of the omission of such work which is carried out by the maintenance organisations of industrial firms and others not themselves in the construction industry, and by do-it-yourself. It has been estimated that if the value of such work were included, this sector would represent no less than a third of the consequent total output. Predominantly the materials for it are supplied through merchants and retailers. Minor new works, and minor works of improvement, are normally included in this sector, which is undoubtedly receiving a fillip from the Government's encouragement of house improvement.

So much for prospects in the home market. Exports have shown a marked and successive annual growth since 1967, and in the first half of this year are over 20 per cent higher in value than for the corresponding period last year. Many building materials have a high weight-cost ratio and cost of transport can be a large element in delivered price. Such materials are not easily exported. It is unwise to be dogmatic—who would think that we can export manhole covers, for example, yet we do, and considerable quantities of fabricated structural steelwork are exported—but clearly the more immediately promising opportunities lie with lighter, low-bulk commodities, the more sophisticated or advanced materials and products, and those in whose selection "prestige" and fashion can play a part. By and large, if we enter the Common Market, our building materials industries should, on margin and with but a few possible exceptions, benefit from a removal of tariffs and a greatly enlarged "home" market despite the U.K. market being more open to Continental competitors. Benefit, too, should lie in a greater demand for construction work in the U.K. for new transport facilities, factories, and so on. Many firms, of course, already own or participate in overseas producing companies, to overcome costs of transport, where British expertise and know-how can be exploited, and to meet differing local practice and requirements.

But—to return to the state of the game in this country—all the indications are that brickwork has not only reasserted itself as by far the best structural medium for our climatic conditions, but is also the "in" material with some of the most progressive designers for external walls, internal walls and pavings. The built environment can only be the better for it.

## Revival in brick construction

By J. H. MILSTED, Chairman, Management Committee, Brick Development Association

At the beginning of the 1960s it seemed to some specifiers at least that the use of brickwork as a structural medium was possibly on the way out. Unpopular with the more avant-garde designers, it also had to contend with Government pressure for the use of newer systems which seemed to pronounce it an uneconomical and thoroughly inadequate way of putting up a wall. Yet a few years later it is possible to write in terms of a revival in brick construction.

An important factor in this reversal of the earlier trend is undoubtedly the disenchantment of many designers with other materials and forms of construction which have proved neither quicker nor cheaper than brickwork and which deteriorate at a wholly unacceptable speed.

A sufficient time has now elapsed for the true cost of maintenance and the serious structural problems inherent in industrialised building to be assessed by local authorities all over the country.

These professional misgivings are reflected in the growing and increasingly articulate public concern with the quality of the environment being created in this country. Not a little of the criticism is directed at the use of harsh and unsympathetic materials in wholly inappropriate situations—especially in housing areas. In these circumstances, it is not altogether surprising that the outstanding economic, functional and aesthetic properties of brickwork are being re-assessed at something approaching their true value.

## Research programme

But a further and important set of reasons for the turnaround in architectural and constructional trends is to be found in the recent history of the brick producing industry itself. When its markets came under competitive pressure, the brick industry was able to bring into train the positive developments which had resulted from its research programme to meet the challenge to its traditional supremacy over all other forms of construction. At company level this manifested itself in the evolution of larger and more efficient production units and the widespread adoption of modern management, manufacturing and marketing techniques. On the collective front, firms representing the bulk of the production of the industry reshaped the existing Brick Development Association to promote the common weal more effectively—not least in the important spheres of communications with the building industry and research and development.

This latter activity has exerted a significant influence in the revival of brick construction. Despite its somewhat staid and traditional image, the brick industry had been investing considerable sums in research and development long before its markets came under attack. Fortunately, this started to pay off just when the onslaught was gaining momentum. The early 'sixties witnessed a major technical breakthrough when the functional and economic efficiency of multi-storey loadbearing brick structures was established beyond doubt. Traditionally, the higher you went with loadbearing brickwork, the thicker the walls had to be. Research showed that with high-strength bricks, sensible planning and the application of sound engineering design it was possible to build 16, 17 and more storeys high with walls no thicker than

are used in many two-storey dwellings.

For a time, however, progress was slowed by the Ronan Point disaster—the tragic gas explosion in a high-rise, pre-cast concrete panel structure which cost four lives and brought about an intensive investigation into the design of tall buildings generally. It is typical of the forward-looking, objective attitude of the contemporary brick industry that, although its products were not involved at Ronan Point, it was the first organisation to start researching the effects of gas explosions and the phenomenon of progressive collapse. Sponsored by the Brick Development Association, the British Ceramic Research Association erected a full-scale multi-storey brick building and, with the co-operation of the Midland Research Station of the Gas Council and the Atomic Weapons Research Establishment, Foulness, subjected it to a long series of gas explosions in order to establish the magnitude of the pressures developed and their effects upon the structure.

The results confirmed what many people already suspected from the experience of two world wars—brick structures have a remarkable capacity to withstand the effects of gas explosions and other accidental forces.

## Wide spectrum

The industry recognises that although the material has been in use for centuries it still has unexploited design and development potential. As visitors to the impending International Building Exhibition at Olympia will be able to see for themselves, sponsored research in hand in the laboratories of the British Ceramic Research Association—among the best-equipped in the world—and the universities of Edinburgh and Liverpool, covers a wide spectrum of projects from the evolution of advanced structural techniques to the development of more efficient handling and bricklaying methods. The extent to which the brick industry is identifying itself with the problems of designers and contractors alike, through this research and development, is an unquestionably important factor in the swing back to brick construction.

In addition to the favourable trend largely stimulated by their own efforts and the swing away from competing forms of construction, brickmakers are currently benefiting from the general upturn of business in the construction industry at large. Thus far, however, the increase in demand has not been matched by any very significant increase in brick production. Due to the recent severe recession in building—especially housing—brickmakers deem it prudent to disperse their accumulated stocks and to take a long, cool look at the likely pattern of forward demand in order to plan their future production requirements. The present supply position is generally satisfactory—such minor problems as exist are regional and are confined to the lower-priced bricks. There are still considerable stocks in Scotland where there is a general recession in construction.

Far from becoming complacent in the face of an expanding home market, some brickmakers are beginning to turn their eyes towards Europe in search of new outlets for their production. Only a few months ago, a major private housing development in Amiens was constructed entirely in British bricks and found a very ready sale among French house-purchasers. Provided transport

be made in import statistics without inordinate cost. The EDCs, and more particularly the Construction Materials Group at that time associated with them, have, however, on previous occasions made fairly extensive studies into the question of import saving. As might be expected, they found that the major import was timber, which could not be replaced by home production. Other items under the broad heading of materials used in works of construction, as distinct from in the construction process (where fuel oil, for example, are substantially used), were generally relatively small in value. Again, imagined prestige, predictions and fashion seemed to play a fairly large part in their choice by the specifier and designer.

There are also raw materials, particularly non-ferrous metals, used to make building products which, like timber, must be imported. So it becomes largely a question of the specifier's attitudes (which might be changed) on the one hand, and import substitution on the other. The latter, in particular, opens up a wide field for debate and controversy, into which overall economy, suitability and performance enter, as well as broader and more fundamental issues.

## Rising prices

Recently, there has been comment on the rising prices of building materials, and it may seem strange that the sharper increase started to occur during a period of declining activity. Producers were, however, recovering from a period of artificial restriction and control and they too were and are suffering from inflation in their own costs, imposed on them from outside and by world market prices for commodities which many of them use. There has been an essential need, too, to restore the return on capital employed to the generally modest level—and here cement, in particular, may be singled out in illustration—which is essential as a minimum to maintain capital investment and progress.

It is a simple fact that building material producers have maintained an enviable overall record, over a very long period, of relatively small and steady price increases. For a period between 1957 and 1960, the cost of construction materials went down. More recently, the official price indices for construction materials as a whole, using 1963 as the base year, show average annual percentage rises, year over year, of 3.2, 2.9, 2.8, 5.5 and 3.5 for the years 1964-69 inclusive—an average of 2.9

compound or just over three arithmetic. For 1970 over 1969, the figure was 8.4 per cent. For July 1971 (the latest figure available at writing) over July 1970 it was 10 per cent. Both these latest figures, derived from the official indices, are noticeably below those commonly given in commentary, and arise from the circumstances already noted.

## CBI undertaking

A price rise of 10 per cent will be seen as a high average figure for building materials, but it bears favourable comparison with many other commodities, services and wages over the same period. The cement makers have fixed their prices for a year, many of the largest producer firms have signed the CBI undertaking and others not within its catchment have subscribed to it, while the Council of BMP has commended the CBI initiative to all its members. Producers, in conformity with their long record, can be relied upon to exercise all possible restraint. Indeed, the increasing development of competitive materials, products and combinations of materials makes this a commercial necessity, quite apart from the need to encourage growth in the market which they serve.

What is the effect of material price rises, as a whole, on construction costs? A rise of 1 per cent results in a rise in construction cost of just about 1 per cent; a 10 per cent increase in cement prices adds between about 1/5th to 1 per cent, to overall construction costs (and much less to a normal house). Of course, rise in individual materials can have a relatively larger (as well as smaller) effect on particular types and forms of construction—an added incentive for producers to keep their prices as low as possible to meet cost comparisons between differing forms.

It is not possible in a short survey, even in a general way, to deal with the many developments—recent, current and future—which affect material producers, such as metrication and dimensional co-ordination, specification by performance, some aspects of data co-ordination, bulk purchase contracts and industrialisation. Suffice it to say that in many of them the commercial balance falls on the building material producers, and they have a very real and continuing interest in part to play, in them.

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## BUILDING VII

## Measuring the impact of Europe

By DAVID CURRY, Export Editor

In August this year the Department of the Environment published a survey of the Construction Industry and the EEC.

It is final passage carries the message that is being repeatedly reached at businessmen on the eve of Britain's Common Market entry: "Above all, the impression received during the course of preparing this paper is the importance of developing European attitudes. Fears have been expressed," the document says, "about an influx of competition, the difficulties of operating in Europe have been emphasised, and the view has been put forward that the common Market concept has little to do with construction."

"But in Europe itself, the construction industry accepts the reality of the market. There is indeed a risk of increased competition and there are very real technical obstacles to operating outside national boundaries; but the feeling in Europe is that these are usually over-emphasised. Once the concept of a massive home market, however its imperfections, is accepted, the problems are used to be of manageable proportions. For the construction industry, it is thought that entry could provide greater opportunities than the reverse."

It is hardly rhapsodic in tone. It reflects the feeling of the industry that the nut is cracked and provided it is spared too much exhortation. In fact, the materials and components industry has an impressive exporting record. In 1970, exports of 51m tons of construction materials reached £86.7m, the first half of this year is showing a 35 per cent improvement on the same period of last year. Overseas sales of materials are showing a similar improvement after reaching £36m last year.

Iron and steel sales, in the form of products like bars, rods, sections, girders and galvanised sheets are also set to top last year's £71.8m. In overseas sales, in terms of output the U.K. lags some way behind France and Germany. It is estimated that in 1967 the output of the construction industry in France was \$17,000m, in West Germany \$14,580m, and in the U.K. \$9,450m. In terms of the bigger size companies operating the U.K. generally boasts more of the bigger size companies, in relation to turnover. France in 1969 had 34 companies with turnovers in excess of £16m, and two with a turnover of more than \$7m. Germany had 17 companies in the first category and four with a turnover of more than \$7m. The U.K.'s figures are 31 and four respectively.

## Third World

The U.K. and the European industry tend to do more exporting with underdeveloped countries than with each other, largely because the cost of transport makes it difficult to compete in a sophisticated market with its own advanced construction industry. In the Third World the tendency is very much to establish manufacturing operations or licensing processes as a response to the very heavy demand for construction facilities by countries trying to build up their infrastructure in the form of roads, housing, docks and the like.

In 1969 it is estimated that French contractors did \$791m. in work abroad, of which only \$143m. was in Europe. The West German figures reflect a similar propensity, with Europe accounting for only \$27.3m. in work out of a \$404.3m. total. British companies carried out work abroad worth \$560.5m., of which the European share was only \$42.6m.

One of the main factors which will boost trade within the Common Market will be the eventual freedom of competition in the field of procurement of suppliers and construction by the State, local authorities and public enterprises.

In the area of supplies the Commission has submitted a plan to the Council which would introduce publicity in the Community as a whole for important contracts, prohibition of discriminatory technical specifications, "objective criteria" for the selection of companies invited to tender and for the acceptance of tenders.

Similar formulae are being considered for public works tendering, though it is likely that public authorities engaged in transport services, gas, electricity and water supply will be excluded. There is also likely to be provision for grounds to waive the rules in certain circumstances.

The general vagueness of the proposals, and the inevitably slow and tortuous pace of harmonisation procedures is likely to put off for many years the time when overseas companies will be able to compete on completely equal terms with native companies.

The Treaty of Rome also aims to allow individuals and

companies to set up shop in member states. This is being implemented as far as private sector construction work is concerned.

A further vital area is that of aligning technical standards with those of the Six. The sectors identified for this are basically product standards, performance standards, testing and certification and codes of practice. In many cases there is still no general Common Market standard, there often being different practices in the northern tier of states to those obtaining in France and Italy. Generally, as with the case of building regulations, Britain's practice is closer to the German and Northern European custom than to that of the "Latins."

## Equipment market

It is impossible to be dogmatic on the question of the impact of EEC membership on costs. The removal of tariffs would have some impact. The U.K. market for construction equipment is about £130m. a year, some £30m. being supplied from overseas. At the same time the U.K. sells equipment worth about £120m. a year abroad. The U.S. and the EEC countries supply the bulk

of Britain's imports, and EEC entry would free imports from the enlarged Community from tariffs ranging from 9 per cent to 22 per cent.

Most of the industry's raw materials are obtained at home. Copper imports would attract no tariff under the Common External Tariff while Canadian timber would be subject to a tariff of between 5 and 6 per cent. The higher costs of this timber is likely to be offset by special terms being agreed with Scandinavian suppliers.

It is clear from the above that the real disincentives to exporting in the construction field are non-tariff barriers like regulations, capital restrictions, labour practices, taxation arrangements (we are to get VAT irrespective of our Common Market entry) and restrictions on foreign tendering. But the enlargement of the home market, and the added competition from foreign companies in this country (although

competition is generally so tight here that overseas companies have very limited ambitions) may well encourage the trend towards greater concentration in the industry and continuous flows of work would occupy and anxious enough to see a established managerial and design teams. Joint operations with Continental companies may offers.

well prove the most sensible first step for British companies. In the building materials area it is generally assumed that specialised products should be the main beneficiaries from entry, though it should be noted that in certain fields—roof tiles in Germany—the U.K. already occupies a dominant position. The U.K. materials industry is dominated by near-monopoly concerns with limited expansion prospects in the U.K. and these may well find expansion in Europe indicated.

The building and construction industry is like a centipede with a hundred legs. Its activities range from ceramic tiles and the manufacture of manhole covers to building multi-storey flats and airport runways. Some of the legs are going to end up with aching muscles, and some of the feet will be trodden on. But the centipede will, eventually, find that it can stand on its strong legs.

Europe looks from the distance like a jungle of red tape. But it is there and we are going to be part of it. The building industry is canny enough to face the problems of Europe, and anxious enough to see a restoration of buoyant times to explore the opportunities it with Continental companies may offers.

## Difficult period for plant hirers

DAVID WALKER

Britain's plant hire industry plays a degree of confidence which seems at first to be quite related to its recent history. Its likely immediate future, however, has been difficult, and the latter is at best uncertain.

The problems of the past year or so stem largely from the closeness of the industry's ties with the building industry. Some 80 per cent of the plant hirers' £125m. a year turnover is accounted for by building and construction contracts.

To begin with, the downturn in building and construction, if anything, helped the plant hirers. For such movement acts as a boost to building contractors to hire rather than buy. As Mr. A. S. Scott, managing director of Cardiff, pointed out at the recent annual conference of the Contractor Plant Association, the effect of releasing builders' capital normally tied up in equipment, reducing their bank borrowing, and saving more working capital.

By within the industry's growth—its rate of improvement of around 25 per cent a year from the £15m. over figure of 1961 is one of the fastest for any sector of industry—grounds for problems were already being laid.

By the end of the 1960s, the squeeze was affecting the number of new entries to the business, and keeping competition within it severe. More important, the boom experienced by most companies in 1969 led to a large amount of further investment in equipment, thanks to the subsequent downturn in building construction demand, is now under-utilised.

## Hire purchase

In addition, the cutback in building led to some construction companies entering the field of the plant-hire field, bringing out equipment for hire, at the moment, they had to use on their own projects. Particular, smaller builders, and, still to a lesser extent, do not buy plant on hire, but use it for a few years themselves, then hire out to others for the remainder of the time at a rate which did little more than cover the HP repayments. An important product of that has been to depress hiring rates generally to points where the return on investment is far below the problems of investment. When a generally than would be payable in most other sectors of business.

At, in turn, has threatened standards of service offered by the industry and has also led to a potential danger to the industry, and has led to certain

itself and the range and variety of plant it is able to offer. Hirers are currently being urged by the Contractors Plant Association to put rates up, and an average increase of at least 25 per cent, has been named as the minimum realistic advance. Only through that, Mr. Scott pointed out at the CPA conference, can the industry prosper and continue to provide first-class service to its clients.

## Bad debts

The recession in building, too, has led to an even more alarming level of bad debts faced by the industry. Hirers have been suffering from delayed payments by builders badly hit by the inevitable effects of the downturn on their own cash flow positions and from the forcing out of business of small builders.

Quite apart from the industry's recent problem as a result of the economic situation, it has also been facing more long-standing difficulties. Relationships with manufacturers of construction equipment are sometimes bad, even though hirers form the manufacturers' largest single market sector. Complaints about breakdowns in expensive equipment and difficulties over obtaining spare parts are comparatively common.

The industry also suffers from particular training difficulties, with an urgent need for skilled construction equipment operators and service personnel. Despite a great deal of work by the Construction Industry Training Board, including the formation of an operators' training school, the very newness of the plant hire industry means that many of the companies in it lack any proper training structure.

That problem is aggravated by the fragmentation of the industry into many hundred operating units. The large number of mergers in recent years, combined with the rapid growth of plant hire generally, mean that many companies have outgrown their local origins to become operators on a national basis.

But the average plant hire company is estimated to employ only 35 people and achieve a turnover of under £100,000 a year operating on a strictly local basis. These small, locally based concerns are still the backbone of the industry. Alone, they have neither the finances nor the manpower to offer proper training in the use of what, in many instances, are now highly sophisticated pieces of equipment.

At the same time, the industry's fragmentation also brings problems of investment. When a large crane can cost over £200,000, small units are seldom large enough to afford the modern advanced plant increasingly demanded by builders. That has been another factor in the rate of mergers within the industry, and has led to certain

forecasts that within four or five years, only a dozen large hirers will be left operating across the whole field of equipment.

At the same time, no one yet predicts the complete demise of the small hirer. There seems little doubt that he will continue to be the industry's backbone for a long time to come, supplying plant for short periods and filling the gaps left by large specialist hirers providing high capacity special purpose machines. Meanwhile, the whole question of structure remains yet another problem for the industry to solve.

Other difficulties facing it arise from questions of transport and insurance. With equipment becoming bigger, transport costs are rising appreciably, pushed up too by the testing and plating regulations and other legislation which has made vehicle upkeep more expensive even if it has made heavy vehicles a good deal safer. Yet clients of the industry often expect transport of plant to be provided free or at near nominal rates.

Here, adjustments between the hirers and their customers are essential if the much-needed reasonable returns on investment capital are to be achieved. The situation is similar as far as insurance is concerned. Present practice varies from hirer to hirer and customer to customer, and it has been suggested from time to time that some plant may be occasionally inadequately insured in respect of any accidents which may occur from its use.

Yet, despite all this, the industry's general confidence remains unshaken. The upturn in building activity which there now seems no doubt, is under way will, of course, help it considerably even though a return to prosperity in construction could remove some of the incentives for builders to rent plant rather than buy.

## Essential part

But plant hire has established itself as an essential part of construction in the U.K. in a way virtually unknown overseas save in the U.S. That that could change is unthinkable, both inside the industry and outside it. And this is much of the basis for the hirers' confidence in the face of the difficulties they know they have to overcome and the changes they are in the process of making.

On a more practical level, hirers have already, indirectly, been aided by the Government. The change from investment grants to a system of profit-orientated allowances has ended the discrimination whereby builders in development areas received a 40 per cent grant on plant they bought and one of only 20 per cent on equipment they hired. Now, buying and hiring have been put on a par, there, meaning that some further movement toward plant hire in the relevant regions is certain.

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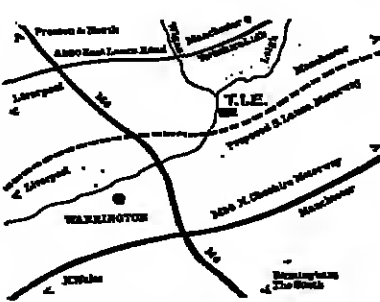
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## BUILDING VIII

# Maintenance rethinking needed

By FED SCHOETERS

"In maintenance, the Committee has found that information and communication problems occur in every part of the subject. . . . No better comment on the whole problem could possibly be found than these words from the Secretary of the Interdepartmental Committee on Building Maintenance, Mr. V. Nohle.

Describing the work of this six-year-old group to a recent symposium, Mr. Nohle said that its final report should be in the hands of the building industry shortly. That it will be a most comprehensive study is borne out by his résumé of the areas into which it has had to delve—economics of maintenance and the effects of taxation; the place of maintenance on the country's 17m. dwellings in the national economy; the law as it stands with its inconsistencies in the protection of the buyer or tenant; foreign laws and regulations; and so on.

He posed the question—as his committee will do in its report—whether it is not obviously better to regulate maintenance as Britain's two major Common Market partners already have done; Germany directly by a set of laws and France through insurance. But in the months before such rules or

laws can come into force there is a continuing need for knowledge on the part of designers and builders, as well as of local authority surveyors and of maintenance officials.

Part of this need has already been met by the Committee through the establishment of the Building Maintenance Cost Information Service. Nevertheless, there still is a daunting amount of work to be done on general communications as Mr. Nohle's statement shows only too clearly. He sees the active parties in the designer, builder, owner, maintenance man complex as overwhelmed by the great flood of new materials and new techniques now available to them and, while commending the work of the Building Research Station and Agreement Board, clearly believes the message is not getting through to the points where trouble through lack of up-to-date information will start.

### Central points

Suggestions are for more widely spread testing and advisory services—perhaps operated by the new large local authorities—relying on BRS and Agreement as their central points of reference.

Again Mr. Nohle puts his finger on a trouble spot by a reference to the organisation of

small building firms with their ad hoc accounting and often unsatisfactory behaviour when it comes to 'carrying out work 'promised' to house and other property owners. The suggestion here is for a handbook for the smaller builder who wishes to improve his efficiency. This would be published by the National Economic Development Office.

Thus in two key areas—technical information and advice to the hordes of small building firms—there would be more precept and advice than ever before. But with the present acute shortage of reliable maintenance men, outside the areas of high employment, precept is not enough and it is indeed a waste of time and money to set up new information services—there already are 500 organisations dealing with construction information—so long as the fly-by-nights can cock a snook at decent workmanship and leave homeowners or tenants with a hotbed job, facing the alternatives of the high cost of making good or the lengthy and expensive process of recourse to law, as it stands.

Sharper and longer teeth in the law soon would awaken a 'need-to-know' in the minds of offenders. A more specific approach to maintenance problems under headings containing that word by the research and

testing authorities would also help. It is surprising that although perhaps half the subjects covered in the BRS programme for 1971 actually touch on maintenance in one way or another, only one title actually contains this word.

Most recent available figures on national expenditure for repairs and maintenance are for 1969 and put the total at £1,865m. compared with a total property replacement cost at that year's prices of £104,000m.

Maintenance is thus absorbing a large proportion of the building industry's efforts and any action that can be taken to reduce the proportion of £125 per square metre on maintenance, against up to £75 per square metre for construction will be well worth while. It is true that the average age of property is between 30-40 years, but there does not seem to be any levelling-off in charges as structures age so that a radical re-think of the whole approach to the problem appears to be necessary.

### Design quirks

It is high time that men trained to look for trouble—the maintenance managers—should be brought in at the start of any project and not when a building is handed over. Advice from men who have experience

of some of the quirks of designers and architects would preserve the latter from mistakes which, in the future life of their product, would save owners from heavy costs, even if initial charges for the structure were somewhat higher.

But involvement of the designer with an activity such as maintenance (the two have normally been poles apart) means that the contractor also will become involved and, indeed, some of the big contracting organisations are turning to maintenance as part of the service.

This is feasible and excellent where there are large groups of houses and/or property to look after. But it is hard to see how it can apply to older properties built by small firms many of which disappeared during the war. It does not take into account the practice, copied from the U.S. of built-in obsolescence on some speculative building sites.

One solution would be a form of contract containing a guarantee by the contractor on the performance of the building in the first several years of its life—or extending the original contract to cover maintenance in this period.

Suggestions have been put forward of copying American practice and even extending it by encouraging big cleaning contractors to undertake minor repairs to electrical services, glazing, plumbing and so on as part of the overall job.

This again does not help the private owner and, if, as the present Administration intends, more and more homes pass into private ownership the paradox of an urgent need for common sponsorship of building maintenance enterprises on a street-by-street basis will become even more apparent if the Englishman's home is to continue to be his castle rather than his slum.

# New era for standards

By ROHN HOPPER, British Standards Institution

November 26 is likely to be one of the most important days in the history of the construction industry in this country.

On that day, at a conference connected with the International Building Exhibition, the British Standards Institution and the Modular Society will present the case for "Performance Standards."

It is no exaggeration to say that performance standards (or specification by performance) is the new, and perhaps the most important, step the building industry will take towards rationalising the construction process—equally as important as the change to metric and the disciplines for co-ordinating dimensions.

In its position as the country's largest single industrial unit, the efficiency of the construction industry has an undoubted bearing on Britain's economy. Dimensional co-ordination rationalised system building into an industrial process, so that all manufactured components for a given purpose would fit into any building design, and could be mass-produced and made cost-effective. Performance standards adds to the scope of this advance by defining the performance or user requirements and leaving open the choice of product design and the material from which the product is manufactured.

They describe simply the contemporary approach to elevate the reconstruction process by improved building design in the first place, and—down the line—design and manufacture of components and site assembly. The aim is to meet more

closely user requirements, and they are having a profound effect on the whole pattern of building as we know it to-day.

At the heart of the philosophy of the performance approach in standards stands the ability of users to state what their requirements are in scientific and technological terms. If this is done the designer, specifier, contractor and manufacturer will be able to be precise about how to meet these requirements and will, at the same time, be unfettered in their choice of design, materials, products, etc.

It will enable the levels of requirements to be recognised in relation to the use of the building rather than unguided selection directly from a manufacturer's catalogue.

Internationally, the U.K. has considerable influence at present, largely through trend-setting in dimensional co-ordination. This offers (through the International Organisation for Standardisation) an opportunity to restructure our technology and standards and check to ensure their compatibility with fast-developing technologies of other countries, especially those of Western Europe.

### Definite trend

BSI, the Building Research Station, the Agreement Board, various Government departments and leading manufacturing trade associations, have been actively considering the performance approach. Performance specifications are a definite trend (indeed BSI has already produced performance requirements for windows). The need now, to prevent the

chaos of fragmentation, is for the discipline of a rational and harmonised approach through standards publication.

How does the performance standard differ from the traditional product and test standard, or code of practice?

Behind the question is the need to look at the performance of a building as a whole—not just as a series of dimensionally co-ordinated assemblies of components and materials, but as a total functional unit satisfying the user's requirements. Natural environmental factors should be resisted with the maximum efficiency and durability possible, recouping user needs with the forces of nature and pollution to give nationally acknowledged and satisfactory buildings solutions.

The answer lies in the word "performance." The present categories of standards, while covering much of the construction process and regulations, must, in some respects, be inhibiting, because they are tailored to traditional situations. Performance standards, on the other hand, are nationally agreed specifications drafted in the full knowledge of the requirement of the building as a whole and related to the specific requirements of each functional part, but leaving a great deal of freedom in design and materials.

This is not to say that the present system of standardising the end product has not been comparatively successful. The wider use of standard specifications throughout industry, and the application by purchasing and contracting agencies, are sufficient indication that the system works, by and large.

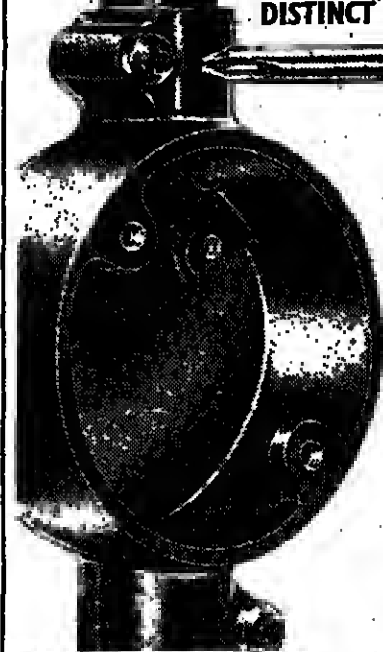
But, clearly, in an industry subject to very few published disciplines, progress will come through the efforts of individual designers/specifiers and contractors working together from the inception of a project to reduce costs by taking advantage of all that the latest technology has to offer. By their very nature, performance standards will make this possible by defining the level of performance required regardless of the individual characteristics of the products which achieve them.

### Interim report

Last year, the Building Divisional Council and the Council for Codes of Practice of BSI authorised an investigation into the implementation of the performance approach through standardisation. The panel, led by Professor Jack Napper, Emeritus Professor of Architecture, Newcastle School of Architecture, have just submitted their interim report, which has been accepted by the council. Before continuing the second stage of studies, the panel felt that it was necessary, having examined the prospect of performance specifications in British Standard publications, analysed their advantages, and pointed to their complexity, to seek constructive comment, presenting some of the implications of performance thinking in specification and standards writing. A document asking for industry's participation will be widely distributed after this article has appeared.

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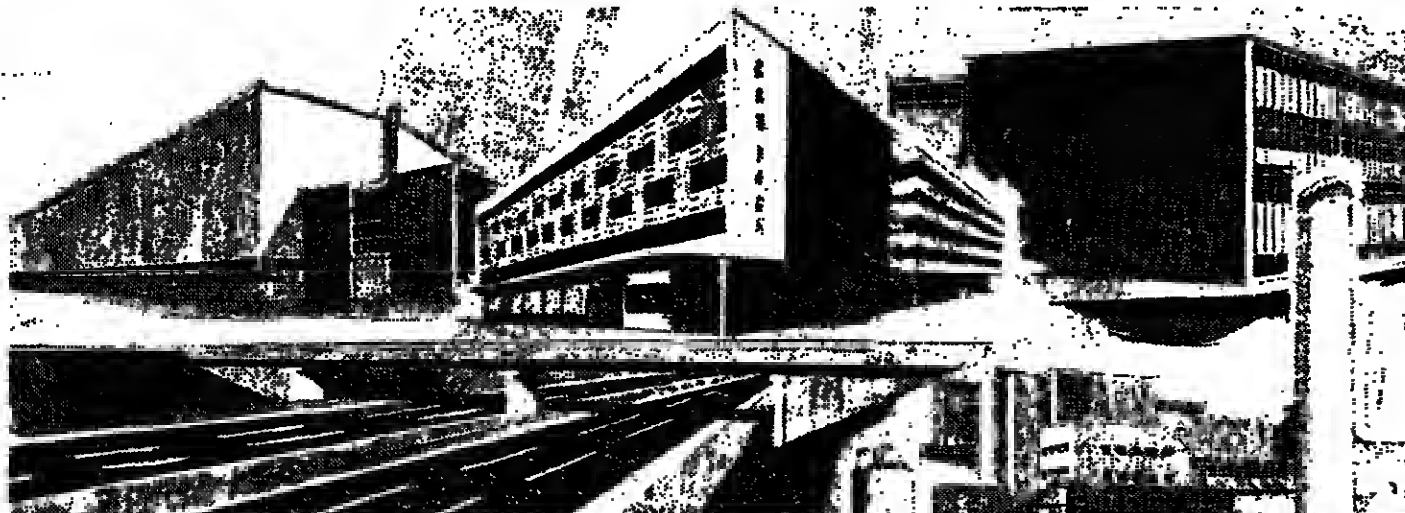
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## BUILDING IX

## Wide scope in research

by J. B. DICK, Director, Building Research Station.

The Building Research Station at Garston, Herts, centre for research in the construction industry, is celebrating its 50th birthday this year. To-day, with projects on its £2m a year research programme and a staff of 800, the station represents a contrast to its stark beginnings in 1921. Then work was done with a staff of less than a dozen, research work was used in disused army hutting East Acton and research expenditure in the first year was less than £6,000. These simple beginnings were the start of a research station, not only the U.K. but in the world and a formidable task facing the research staff was to "put science into building."

In 1925 the station moved to its present home at Garston, near Watford, and began the building of a research centre which has become the model for construction research establishments all over the world.

## War problems

One of the main developments of BRS in the 50 years since its inception has been in the range of subjects dealt with. At first it was concerned with materials and especially their properties and their performance in use. Very soon began on structural strength and on heating, ventilation, lighting and acoustics. In 1945 war brought its problems — civil defence research, repair of damaged buildings and use of substitute materials.

After the war, expansion resumed with particular emphasis on environmental studies. In 1950 came the transfer of BRS to the work on user requirements, mechanical plant operations and economics in the then Ministry of Works. The need to help colonial territories with their building problems led to the establishment of BRS Overseas Division which now has the brief to help make the station's work available to any country receiving British development aid.

The BRS Urban Planning Division was set up in 1966 so the station could extend its work in this field and specifically undertake work for the local planning authority.

In 1970 the Building Research Station Advisory Service was set up to advise on all construction problems within the competence of the station. The service was welcomed by the industry and used extensively, particularly in the field of the

longer type of special investigation involving research for a client.

In parallel with this widening range, the work has also developed in many other ways. In common with many other research institutes, there has been a long-term increase in the sophistication of the laboratory equipment and the experimental facilities on the station. The purchase of an electron microscope and probe, the installation of a computer, the provision of facilities such as anechoic and reverberant chambers and the special laboratory for research on structures, all imply higher capital investment per member of the research staff. There have also been changes in the scope of the subjects to be tackled. At first it was mainly materials which were studied, then components and then assemblies and complete buildings. Similarly the bulk of the early work was done in the laboratory, but an increasing amount of work has been done on mock-ups, on completed buildings, on building sites and social surveys of user experience and behaviour.

The station in recent years has also undertaken a certain amount of development for example the current work on the Go-Con pressed panels and glass reinforced gypsum plaster and cement. The Go-Con process for pressing concrete panels has been developed by BRS over the past seven years. The pressing process is a rapid and economical method of making panels of any shape and size within the capacity of the machine. The exclusive licence for the commercial use of this technique has been granted by the National Research Development Corporation to Go-Con Concrete Limited, a company set up specifically to promote the process and backed by several powerful industrial groups.

## Glass fibre

Alkali resistant glass fibres for use as reinforcement in ordinary Portland cement were developed by the Building Research Station and are now being produced on a pilot scale by Pilkington Brothers Limited, who are collaborating in this research. Work is proceeding at the station on the development of production technique



The BRS structure laboratory where a pre-cast concrete system is being tested.

for glass reinforced cement composites and components that best utilize and demonstrate the properties of this new material.

Glass reinforced gypsum plaster was used as a mock-up material during the development of fabrication techniques for glass reinforced cement at BRS. It was soon found that this composite—made from commercially available E glass fibre and hemihydrate gypsum plaster—was in itself a versatile new structural material with excellent fire resistance and good tensile and flexural strength. Components were designed to demonstrate the material's properties, including a school partition system. In 50 years the Building Research Station has carried out thousands of research projects, many of which have had far reaching effects on construction technology and thus entered the lives of millions of people. The station is primarily an applied research institute; its research is undertaken with application in mind, the final aim being to effect change in practice and not simply to pursue knowledge for its own sake. Essentially the selection of research projects the station adopts a cost/benefit approach to choose between alternative proposals. The estimation of the cost/benefit ratio of a research proposal is not yet an exact science, but there is no doubt that the approach can lead to better decisions: a more conscious assessment of the character and

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## Advances in computer use

By TED SCHOETERS

If all things were perfect in this imperfect society, it would now be possible for every architect or quantity surveyor, indeed anyone involved in a building or civil engineering project, to make his contribution in such a way as to dovetail dynamically into a computer control system.

With minimum paperwork and nothing more than a set of routines ostensibly having little or nothing to do with computer processes, each discipline would contribute to the formation of the complete concept and the model thus built up would be designed to have its various parts react internally in obedience to pre-established rules, producing information and questions vital to the various participants.

The ultimate could be an instruction centre or centres at the site where information controlling the work would be displayed, and where details of progress would be fed in—

eliminating for ever the consultation of plans and blueprints. Each step would fit into a streamlined progression with waste of time and duplication of effort a thing of the past since routines such as materials and plant ordering at the correct time, payroll handling and so on would flow automatically from the standard information fed in during the previous contract stages and the basic control programmes.

Reality is far from this ideal. Official efforts to achieve some measure of standardisation in certain areas of operations, in progress since 1967, are only now starting to show some results, and all the time-expensive programming work is being done to solve problems—analysis of structures, for instance—which have already been solved not just twice over but perhaps 20 times.

## Industry reaction

Partly due to the diversity of computers in the 50 or so large installations employed by the construction industry and partly to the old Anglo-Saxon "NIH" (not invented here) reaction, this situation must be resolved in time as economic pressures in the country and within the industry continue to build up. But it is surprising how many computer people still are ready and willing to reinvent the wheel in the secure knowledge that senior management will not recognise this operation for what it is.

Meanwhile, under theegis of the Department of the Environment, Loughborough University and the National Building Agency are promoting the standardisation at different levels: from outside the field, tant civil engineering service the Department of Health and Social Security has put considerable effort into "CUBITH," a being special results from bold attempt to cut paperwork an effort made some four years ago to find out whether it would be possible to get away from the difficult problem of using widely different com-

puters by writing a library of routines capable of analysing various types of bridges or road lay-outs in a generalised form. But the library would contain a master program which would provide the linking software enabling the routines to run on a particular computer.

## Overseas selling

Work has advanced so far that a number of routines are already available for use at the centre on an ICL 1904A or through the SIA bureau's CDC 6600 in London and are being made available for operation on the many IBM 360 computers in use in the country.

Dr. R. J. Allwood, who heads the centre, has aroused great interest in the development across the Atlantic, where recent adversity in the computer world has provoked an awareness of the need not to waste any of the man-hours of expert time a complex program suite demands. Program interchangeability is the new watchword and Genesys is one key to this economy. The centre is thus involved in a vigorous overseas selling campaign both for the system and for the programs in its various sections. But the final success of the idea inevitably must come from the support made available from domestic industry itself.

Dr. Allwood told the Financial Times that so far as he knew, this attempt to make available such an extensive suite of working programmes, independent of machines and manufacturers' software, was unique. This probably explained the degree of interest in America, which could hardly be considered backward in applying computers.

One year old is a generalised management information and control system designed for application to construction projects by the National Building Agency. Normally it would be used to evaluate and review the building operation through

a computer bureau but it can be used by organisations with their own machines.

"COMPACT" is intended to absolve the user from the tedious and expensive job of planning his own PERT system. Input of information is on standard forms. In return planners and site managers receive a wealth of detail on timing, costs, labour, plant and materials required and so on. Periodic reviews made automatically in course of construction single out areas where management needs to act to keep progress and costs in line with estimates.

The most important aspect of this system is the schedules it produces to tell management when designs should be sent in by architects and engineers and when materials should be ordered and delivered. It is probably a common feature of most systems like COMPACT but the important point is that NBS has done a comprehensive job and that the work is widely applicable. There is, again, no need to reinvent the wheel.

Much more ambitious is CUBITH, best described as a systems analysis approach to the vast problem of the Department of Health and Social Services in building the specialised facilities it needs all over the country with speed and economy. Computing is intimately involved with the application of the various stages of this approach and it has been used on many occasions now to control hospital construction.

In the world of industry, several computing operations which were first set up to support construction or planning activities within a group have "gone public," so to speak and are offering services as bureaux. Routines developed to suit the industry's particular problems are widely available and with the trend among computer owners towards greater reliance on the specialist in a given area rather than doing all the work in-house on inadequate equipment the future for specialised services seems assured.

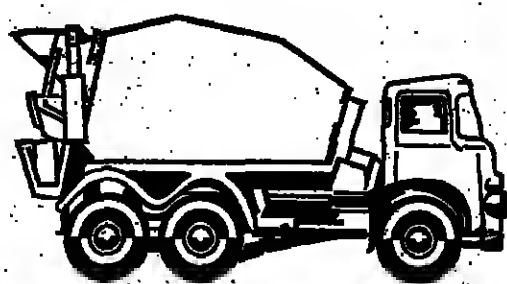
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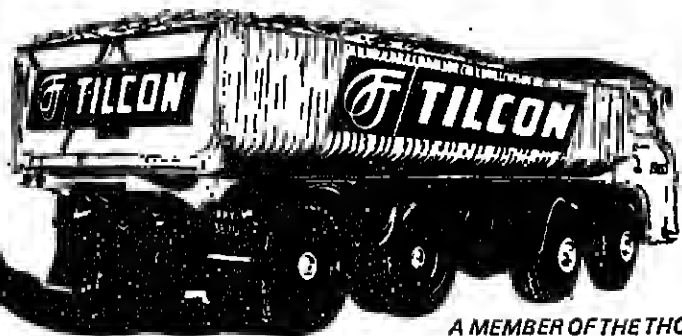
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### BUILDING X

## Definite trend towards negotiated contracts

By F. E. GOSTLING, Chairman, Contracts Committee, National Federation of Building Trades Employers

In May, 1967, the Building EDC issued a report entitled "Action on Banwell" designed to examine how far the recommendations of the Banwell Committee on the Placing and Management of Contracts for Building and Civil Engineering Work had been implemented and, where appropriate, to make further recommendations.

Paragraph three of this report, "Appointing the Contractor," made it quite clear that there was a definite trend towards negotiated contracts in public building and the Building EDC Committee firmly advocated this form of selection and recommended "that Central Government departments continue to urge the use of negotiated contracts on local authorities, especially for larger schemes." Indeed, at this time, with the active encouragement of Central Government, mainly through its National Building Agency, an increasing interest in, and use of, industrialised building and rationalised systems was opening up still further the possibilities of negotiation and a greater participation by the contractor in the design process.

#### Public sector

The EDC Committee had, of course, obtained its statistics from work carried out in the public sector. Clearly, it is impossible to ascertain exactly how the private sector places and manages its building work. However, the manner in which Government and public bodies conduct their affairs has great influence on those who operate outside these institutions, and private corporations and individuals, having far greater freedom of action, tend to move far more quickly once a trend has been set. That the trend has been set is made clear by the numbers of contractors of all sizes quite prepared to enter into negotiation, fully realising that their ideas and methods have to make a real and meaningful contribution not only during the construction process but at the design stage also.

It is for this reason that some contractors devote a substantial part of their organisation to the promotion and development of negotiation, to some participation in design and to costing so that the full use of techniques and systems sponsored by them, and the experience gained by these specialist departments, can effectively contribute to worthwhile savings in time and cost—all this within the traditional arrangements whereby the building owner's professional advisers control the operations and arrange for the co-ordination of the many activities involved.

In some situations the contractor could be providing a large part of the design function in the form of a system where the production units are manufactured off-site, or where equipment has been produced to provide standard modules or components for on-site production, or where the building process has been rationalised to fit in with the easy assembly of standardised units manufactured under the direction of the company operating the system.

Most building contracts readily lend themselves to negotiation, particularly those where the nature of the work is such that very careful selection of a contractor is vital to the successful outcome of the project. In such cases there may be one or many key factors to be taken into account, such as speed in execution, the size of the scheme, the complexity of the operations envisaged, the highly specialised nature of the work, the location, and the risks involved, to name but a few. The need to save time is usually the principal factor in a decision to negotiate. A manufacturing company with an over-full order book needs new build-

ings quickly, a developer with an expensive and valuable site wants his investment to produce revenue as soon as possible, a local authority with a large and urgent housing programme; these are typical situations in which time is an important factor to the client.

#### Pre-contract time

The period between the client transmitting to the designer what he thinks his building needs are, and the actual start of building operations on site is known as pre-contract time. On some projects this period can be as long and sometimes longer than that needed to construct the building; analysing the client's requirements, carrying out site surveys, obtaining town planning approvals, Office Development Permits, or Industrial Development Certificates, conducting negotiations with adjoining owners, observing traffic requirements—these are only some of the matters to be dealt with. All take up valuable time.

It will be seen therefore that a commercial or industrial building owner in urgent need of accommodation, and/or having acquired an expensive site and faced with such daunting prospects such as those I have outlined will press his professional advisers to shorten this expensive pre-contract time by every conceivable means.

Pre-contract time is not only expensive in the direct terms of general expenditure, fees, interest charges, the loss of revenue or revenue potential, but also in the indirect terms of the cost of inflation. Quantity surveyors and others responsible for cost evaluation and cost control of building projects are acutely aware of the effects of increased costs due to inflationary pres-

sures and the problems that arise in making adequate allowances in any feasibility study.

The early appointment of a contractor can have many advantages—the early involvement of the men who will control the production of the building leads to familiarisation with the project and the "feel" of it; the team becomes used to working together before operations start. The contractor, being concerned with production in terms of time and cost, is often keenly aware of the problems thrown up by a particular location and project, and because of previous experiences, is often in a position to make positive and valuable contributions at the pre-contract stage: by having already available the necessary machinery, equipment and the "know-how," and by being able to offer advice on the relative values of various methods of construction. As most modern buildings are complex in that mechanical and engineering elements—heating, ventilating, electrical, lifts—represent a substantial part of the whole, it will be seen that there is not only need, but a distinct advantage in the contractor's early involvement and participation in decision taking.

#### Local firms

Often a contractor is selected for negotiation because he is well-known to the professional advisers or to the client, or to both, and this forms the basis of many satisfactory relationships among the very small local firms as well as among medium-sized firms and large national contractors. In some cases a contractor, whether large or small, may provide a highly specialised service or category of skills, and here

selection can be almost automatic.

For some building owners competition by price is an essential part of their purchasing and tendering arrangements, and of course there are clients who feel that they would be failing in their duty to those whom they represent, unless they tested the market, and that negotiation with one contractor is unacceptable. It is for this reason that the system known as "two-stage tendering" is being increasingly used as a means of early selection by competition. The first stage of this method is for the professional advisers to invite a limited number of contractors who they consider are best equipped in terms of size, management, and technical ability to carry out the work to tender on bills of approximate quantities, notional bills or schedules of rates that are applicable to the project in hand. With the result of this preliminary or first stage resolved, the professional advisers enter into negotiation on the second stage with the successful tenderer. By these means many operations can proceed in parallel, which not only saves time, but can result in a better building being handed over at the end.

The observation made in the Emerson Report of 1962: "In no other important industry is the responsibility for design so far removed from the responsibility for production" is an oversimplification of a complex problem. But if the early involvement of well-equipped and competent contractors along the lines I have described here can make this criticism less valid—as I believe it can—then so much the better for the industry as a whole, as well as for its clients.

## Firm price tendering a cause of bitterness

By MICHAEL CASSELL

The building industry is at something of a loss in knowing just what it can do next. Rarely has it launched such an intensive and prolonged campaign to alter a Government's way of thinking but with such little effect.

The centre of the controversy, lest there should remain anyone remotely connected with the industry who is not aware of the situation, is the firm price tendering policy which was introduced again in 1957 and obliges any builder to provide definite cost quotations on any public works contract expected to last for up to two years.

Arguments from both sides, are quite straightforward and each party is equally convinced of the validity of its own case. The charges of the industry and the defence tactics of the Government have not been very well rehearsed in the last three years and in 1971 the campaign has certainly reached a climax. It has served to illustrate the industry's ability to shout as loudly as anyone if it feels it has a justified complaint but at the same time has shown how even the most vociferous and persistent lobbying tactics can fail to spark Government action if that Government firmly believes the policy under attack is in the best interests of the nation.

#### Price rises

Inflation alone has brought the firm price tendering row to a head. The policy worked well until about 1968, when the prices of building materials began to rise sharply. The industry now claims that with price increases continuing at an unprecedented rate any Government directive which compels builders to estimate the pattern of costs over a two-year period is a nonsense. To cope with such a situation, they say the contractor is forced to build into his tender a sum to take account of price increases which he can only attempt to predict.

As the president of the National Federation of Building Trades Employers said in one of his latest forthright attacks: "The only possible consequences, it appears to me, are either that contractors will refuse to tender at all on a two-year firm price basis or that they will simply load their prices unmercifully in order to take care of all possible cost eventualities."

The Government, which places Mr. Julian Amery, Minister for Housing and Construction, in the firing line, has been

accused of being "short-sighted" and "obstinate" in its insistence on the continuation of a "twisted and spurious policy"—harsh words from an industry whose prospects are nevertheless considerably brighter than they have been for some time, albeit in only certain sectors.

#### Price restraint

Its total opposition to the existing ruling has not been diluted by the recent Confederation of British Industry price restraint initiative—supported by the Government—which involves the holding of price increases to 5 per cent. over the next 12 months. This, say the builders, is tantamount to an admission that one year is the maximum period over which price movements can be forecast with anything like accuracy.

Back to Mr. Harry Shouksmith, NFBE president, who said after Mr. Amery's last refusal to change the policy: "In the context of the CBI limitation on price increases for one year, it is quite incredible that the building industry should continue to be persecuted in this way. At a time when building costs are rising at a rate of 10 per cent. a year, it is grossly unfair to insist on firm prices from contractors for so long ahead while no such guarantees are sought from materials suppliers or manufacturers."

The contractors have repeated on several occasions that they do not oppose the policy on principle but they claim it is simply unworkable in the existing economic climate. There are signs, of course, that this climate might change but there has been nothing of any major import so far on the prices front which would see the builders toning their attacks down.

A compromise, they state, would suffice and the most popular formula involves the reduction of the two-year period to one of 12 months. Popular, that is, with the industry, for neither has this suggestion made any headway with Mr. Amery.

The Minister has contended throughout that the policy is disinflationary and claims that firm price bids continue to be made freely with little or no evidence of undue provisions being made for the "X" factor—unknown future price increases. Neither, he is quick to add, do individual companies appear to have suffered untimely deaths at the hands of the firm price tender.

The builders in return claim that the policy has only appeared to be palatable because of the recent low levels

of activity within the industry which has led to the acceptance of work under far from satisfactory conditions. As another compromise they have suggested price variation clauses, to allow for cost fluctuations on that part of a contract most susceptible to increases, but the overwhelming additional volume of administrative work such a decision would provide cannot be easily overlooked.

In September, the Federation of Master Builders laid down a challenge to the Government to provide the industry with an opportunity to test the contention that the policy was disinflationary.

It was suggested that a cross-section of contractors in the industry should be subject to the existing regulations while others

would be free to operate a rise and fall clause. Comparison of the fortunes of the two groups would provide the answer one way or the other. The challenge has yet to be taken up.

So the industry has stated, via the NFBE, that it can no longer support the Government in this policy. It can now little else for in directing members not to accept public works contracts, it would run foul of the Restrictive Practices Act.

All its considerable efforts date have had little effect although Mr. Amery has shown himself to be genuinely sympathetic to the builders' cause. His reluctance to change the situation, however, does mean that the construction industry will not be carrying with the fight.

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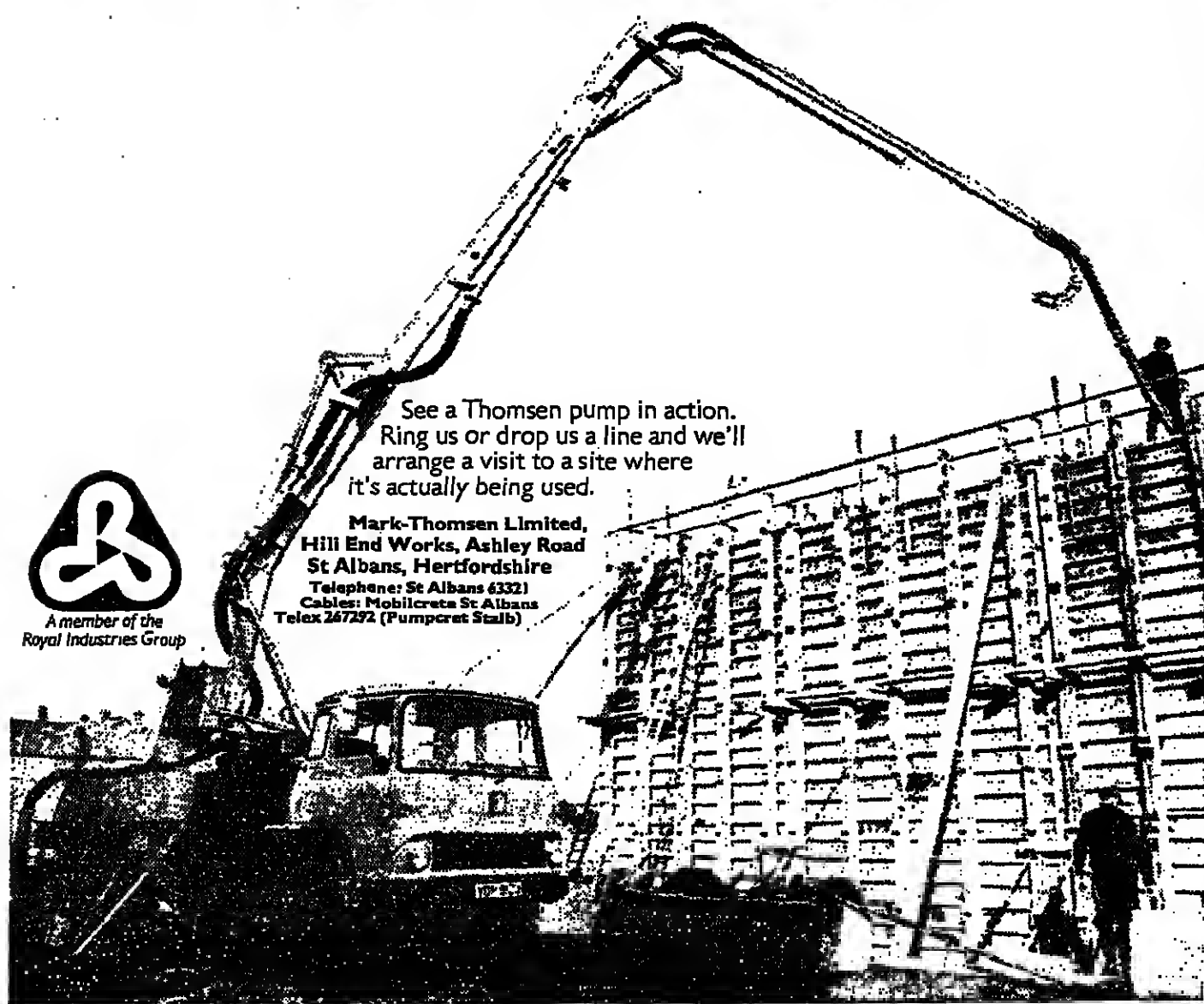
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king the industry as a many building sites are still e, productivity is probably appallingly bad and this inevit- s, slowly. One can- ably leads to low output and prove it, however, and the poor standards of workmanship. ty of available statistics is Some builders have shown what y questionable. The top can be done to increase productiv- e shows the general in- ity but unfortunately they are e in the gross output of still in the minority.

Industry from 1963-1970, at Bricklaying serves as a good ant prices, divided by the example of how crude productiv- ally recorded total number ity increases can ignore real y employed by firms in the improvements that have rry. From these figures one occurred. In most surveyor's deduce that the average manuals the labour constants 1 decrease but the average used for brickwork—which re- al increase in output per- flect productivity—have been tive has been 5.4 per cent. unchanged for many years. In t unfortunately this is only t

## “The Lump”

Official figures for the army's labour force do not include the Lumpia. This phrase describes the vast proportion of crafts- and labourers, who escape payment of SET and other deductions by offering their labour as "self-employed". They are not usually regarded as bona fide subcontractors and many individuals—it is commonly alleged—at least part of the time as unemployed benefit claimants. The Phelps-Brown Report in 1968 estimated "the total in 1965, 200,000 men. It is very well be a quarter of a million, and a growing list of large numbers of self-employed workers, productivity in the industry has increased at over 2 per cent annum.

### Brick analogy

in this, however, begs a series of important questions as to the quality of work, the price paid for it, the capital resources involved. Such as it is, how has increase in output per man been achieved? How can it be improved? Let us dispose of the fallacy that increased productivity means that workers do not work harder. Studies have shown that a great deal of workers' effort goes into finding inefficient organisation and management of the job to be done. Conditions on the job, however, may not be the best. The lower graph shows that the relative increase in building labour costs compared with the costs of materials indicates the results of a policy of too

easy reliance on financial incentives. It also shows the reason for the trend away from labour intensive methods and the development of systems which rely heavily on off-site manufacture of component parts. years ago the appraisal and encouragement of new building systems in the housing field. Undoubtedly system-building in schools and hospitals as well as housing has contributed substantially to the general

Financial incentives for the operative-leaving side of the important social issues involved because there is simply no space in this article to discuss them—are, of course, simply one aspect of the proper use of resources (labour, materials, finance) by the builder and the building owner. This in turn points to the need for better co-ordination between designers and specifiers (architects and surveyors who are preparing the drawings and bills of quantities), the contractor who erects on site and the suppliers and sub-contractors who provide him with materials, components and specialist work.

As related to the need for planning and management in the design and erection of a building project as a continuous operation, the study points to the necessity to use the general management concept of input per man-hour. The output per man-hour with a peak around 1963. The passing of this peak however by no means indicates that systems are finished and that designers and builders are reverting to traditional construction. It means rather a better integration of new techniques with the use of traditional materials and the more sophisticated adaptation of modern building methods to traditional design.

In a recent study carried out by the NBA on some 30 local authority sites, it was clearly shown that system-building produced a significantly higher output from site labour than the generally accepted norms from traditional construction. The average number of man-hours

## New techniques

In the past four years this has given rise to great interest in the industry in new management techniques—critical path analysis, computers, resource analysis, and so on. Unfortunately these have all too often been either wrongly applied or introduced to organisations who have not had the basic management talent to absorb and use them properly.

The National Building Agency launched last year a very simple method of computerized planning and control technique called "Compact," which is having considerable success with smaller and medium-sized firms. Given a very elementary management structure, with responsibility for planning, buying, and job control allocated to adequate staff and directors, it permits the builder to plan and control simply and at a fraction of the cost of more sophisticated systems, as few, or as many, activities as are appropriate to a given size of job.

The National Building Agency had as its initial task some seven

years ago the appraisal and encouragement of new building systems in the housing field. Undoubtedly system-building in schools and hospitals as well as housing has contributed substantially to the general improvement in output per man with a peak around 1968. The passing of this peak however by no means indicates that systems are finished and that designers and builders are reverting to traditional construction. It means rather a better integration of new techniques with the use of traditional materials and the more sophisticated adaptation of system-building methods to traditional design.

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# The opportunities of metrication

By TONY FRANCE

Years ago leaders in the building industry decided that the conglomeration of components they used, each available in a variety of dimensions apparently chosen at the whim of the manufacturer, should be rationalised and reduced to a logical scheme. Building has developed with dimensions directly related to man, architectural designs that are compatible and acceptable to his proportions, and components that are convenient to his hand. This was fine when the pace of life was slower and individual craftsmen shaped a building

and its parts, but it rapidly been taken away from the became intolerable when pre-industry and rationalisation is fabrication was introduced, and being imposed by Government everything had to fit together decree.

The official term is "dimensional co-ordination" and the construction industry is almost the only one that is linking the change to metric dimensions, about which there is no option, with a decision to rationalise those dimensions. Dimensional co-ordination means the establishment of a limited range of related sizes to be used in the design and construction of buildings and in the manufacture of components.

value for money and produce an appreciable saving in building costs by reducing the number of components required, by eliminating cutting to waste and by raising productivity, both in the factory and on site" (MoHLG Design Bulletin No. 16). It is stated that by providing interchangeability of components at the design stage it is intended to widen rather than reduce the choice of solutions open to the architect and the client.

But, as the British Standards Institution points out, architects who design now in imperial measures will produce buildings that will be obsolete as soon as they are completed because it will be well nigh impossible to maintain them once imperial dimensioned products are no longer manufactured. The National Federation of Builders and Plumbers Merchants estimates that in five to six years non-metric products will no longer be stocked, even for repair and maintenance requirements. It points out which others like to keep in mind when discussing plans for future building work with their architects.

### Basic sizes

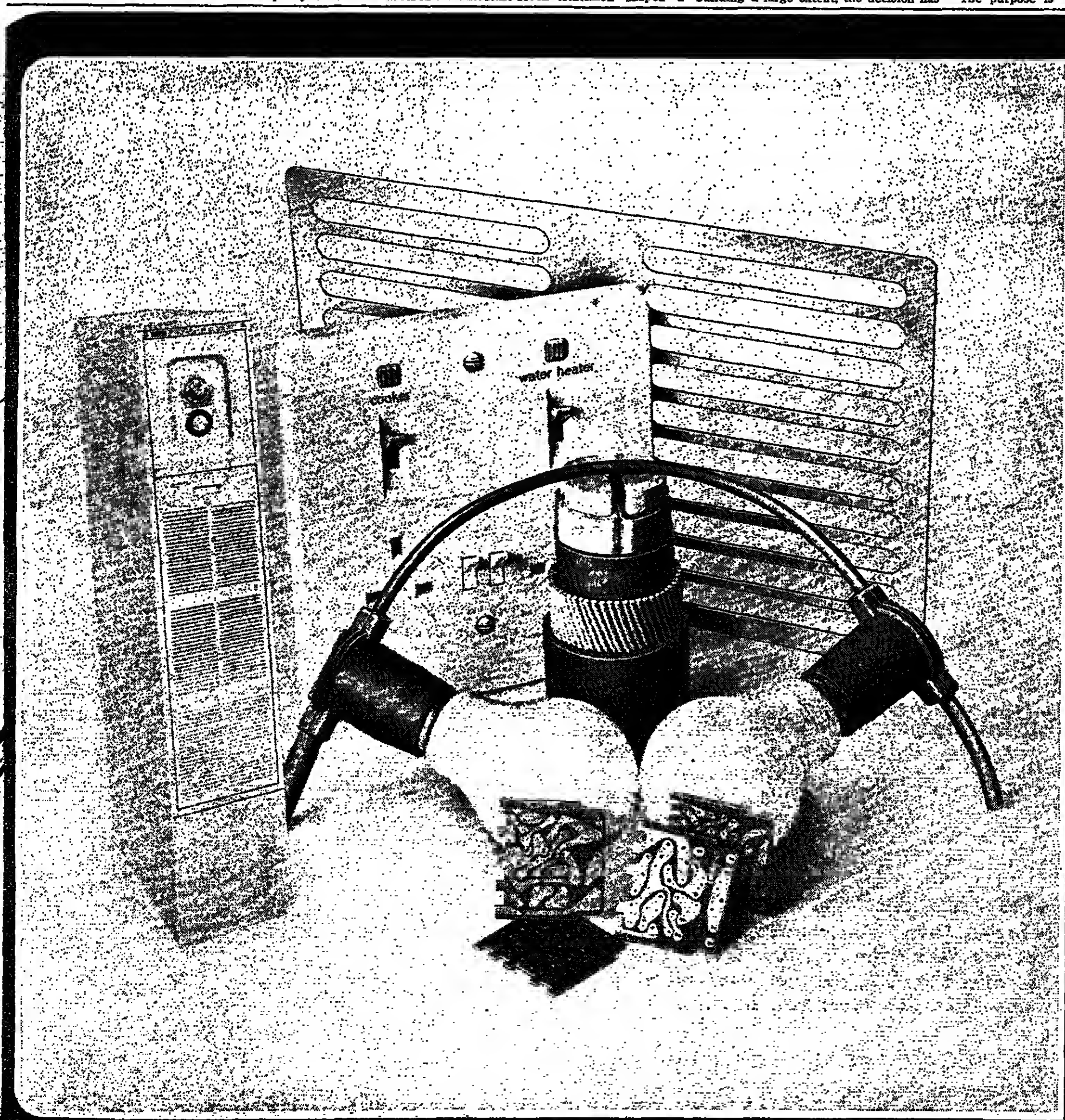
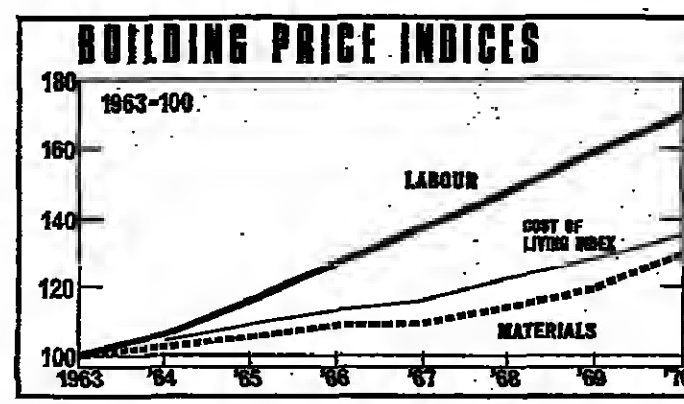
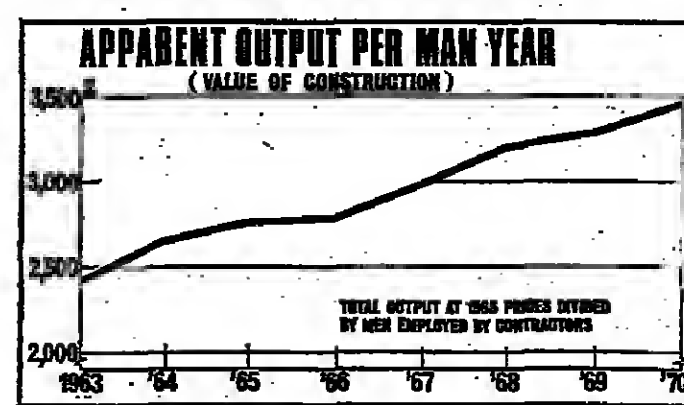
The new British Standards for designing in metric have now all been published. The first was BS 4011 Basic sizes for building components and assemblies, in which the basic sizes are in descending order from a 300mm module. Within each category, such as windows, door frames, wall panels, floor slabs, etc., the resulting co-ordinated sizes should be the same in all materials, and where a number of components are assembled the overall sizes of the assembly should be in accordance with the basic sizes of BS4011.

The co-ordination of building dimensions was established with a series of standards which allow architects to design co-ordinated metric dimensions and manufacturers of products to go a long way towards filling the need for metric components (BS 4606, PD 6445, PD 6446). Part of the metric programme included production of a list of building products which enables anyone to identify components likely to be affected and the way in which they will be affected (PD 6432). Highest priority for metrication is given to rigid flat sheet materials such as asbestos board, block-board, expanded plastics and plywood and the British Standard that provides a co-ordinated range of sizes for them (BS 4606) is entirely new.

It is possible for architects to design substantially in co-ordinated metric dimensions now, even in the absence of some detail specifications. Meanwhile, the programme for full window standard should appear later in the year. The standard on co-ordinated dimensions for kitchen fittings is in its final stages and is related to international agreements with which BSI is intimately connected.

## Window standards

Recent work on co-ordinated dimensions which will ease the tasks of several trades is concerned with baths, sinks, PVC drain pipes, clay drain and sewer pipes, roof and wall tiles, roof slates and roof coverings of lead, copper and aluminium. Thermal insulation materials have been metric for some time. The metric standard for door sets is to be published shortly—so are those on aluminium and steel windows. A timber window standard should appear later in the year. The standard on co-ordinated dimensions for kitchen fittings is in its final stages and is linked to international agreements with which BSI is intimately connected.



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## BUILDING XII

# Need for closer human contact

By H. A. N. BROCKMAN, Architecture Correspondent

There is much trouble in the building industry just now. Although influenced by the present alarmingly disturbed state of society in general, where long suspected and unsuspected abuses are being uncovered and "establishment" in all senses of the term is being questioned, the industry has domestic problems which its supporters, critics and detractors are by no means at pains to hide.

A classic example of the breakdown in industrial relations was recently highlighted by a union official, quoted as saying that during the now notorious troubles at the Barbican, men had abused their trade union officials, there were difficulties in both design and construction and the contractor, moreover, found himself "in a nightmare situation." The company concerned, he added, had great difficulty in planning a job which led to bonus payments fluctuating between "1s. 6d. to 19s. 6d. an hour." He then spoke of sites in London where bonuses of £80 to £30 per week were being paid above the £20 basic wage, and of a recent advertisement for carpenters at £70 a week.

## Frank opinions

All this was said at a conference organised by the Junior Liaison Organisation, representing architects, builders and engineers, which considers that "the apparent conflict in the interests of our industry and the society it serves needs to be under constant review." But other equally frank opinions were voiced during this stage of "review." A spokesman for the Department of the Environment pointed out the industry's achievements in the past 25 years, "vast, largely unsung, only remarked upon on the occasion of failure, and usually undertaken without assistance or subsidy." Mr. Peter Trench, deputy chairman of Y. J. Lovell (Holdings) Ltd., the doughty champion of the builder, felt that conscience alone should persuade clients not to point the finger of scorn, especially those who thought they could

get a cheap deal by setting hungry builders at each other's throats. The architects' cudgels were wielded by Sir Hubert Bennett, lately Chief Architect at the GLC who is now director of Star (Holdings) Ltd. If we lacked a social conscience, he said, then we might as well be frustrated by restrictive legislation. There were other ways in which we could rebuild the environment but we accepted the straitjacket that existing legislation placed upon us. "I'd like to see," he said, "new towns being built without the existing town planning legislation or without the current financial regulations."

## Social conscience

Well there you are, history, as always, tending to repeat itself. In 1942, when Reith became the overlord of planning at the Ministry of Works, it was he who invited planning authorities to forget the law as it stood and to produce their plans as they would ideally wish them to be carried out. It was the London County Council which—without a rather sanctimonious reservation that, although produced by its own Chief Architect, J. H. Forshaw, with Sir Patrick Abercrombie, the Council completely dissociated itself from the philosophy of the plan contained—produced the County of London Plan, 1943. The extraordinarily human and visually promising proposals of that very fine document, produced during the most distressing period of the war, under a tremendous strain which led its creators to illness and even death, is now unrecognisable, but if ever a planning conception it did so in that work.

It is so often that Mr. Peter Trench brings us back to earth when social and aesthetic conscience tends to ignore practical considerations. Mr. Trench said there was "very little science in the building industry to-day and there is too much poor workmanship and design."

The need for far closer personal contacts between all members of the industry has never been greater.

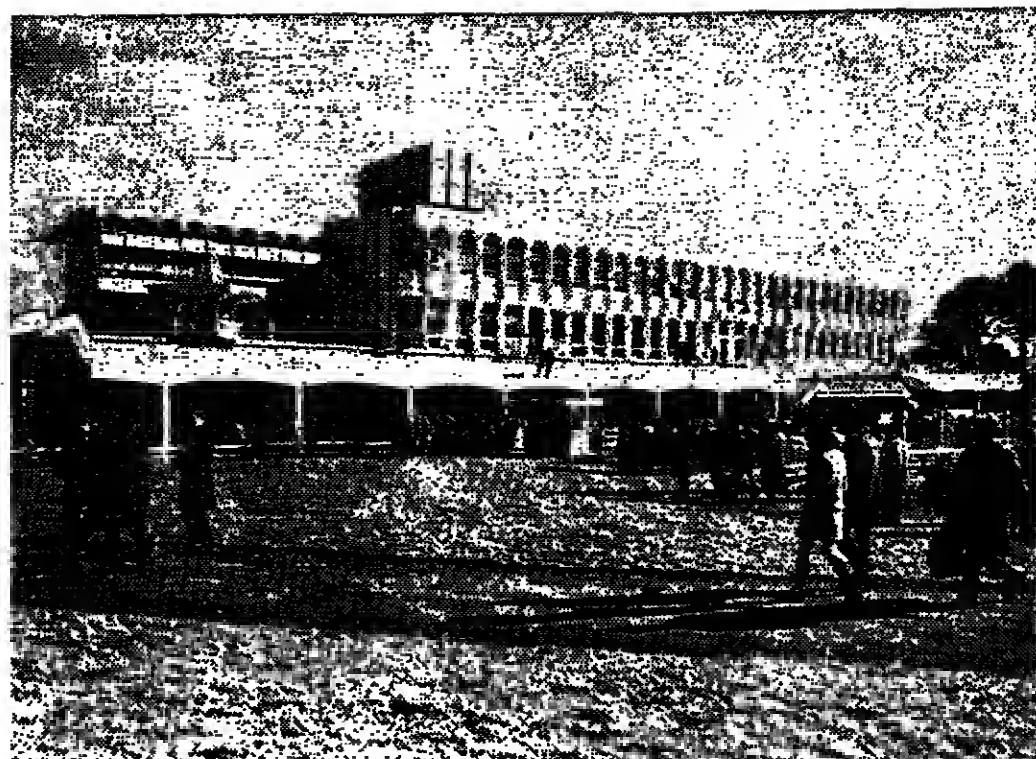
Nevertheless it was an unjustified criticism when set against the Government's insistence upon fixed-price tenders when prices were not being controlled elsewhere. He foresaw a lack of conscience continuing, unless someone could "motivate over a million people in the industry to adopt a completely new way of operating."

While prominent members of the industry can speak publicly as frankly as can the members of this valuable liaison organisation there is hope that at least people are beginning to appreciate where things are going wrong. It is true enough to say that there is no virtue in correcting one fault, abuse, or piece of ignorance, in isolation from the remainder of this complicated and fragmented but totally essential industry. In some ways it is the very fact of its essential character where lies its weakness, for the most apparent faults in something which is essential to existence can easily be tolerated where there is no other source to turn to for the product.

## Design stage

One of the most fundamental needs of the client is "value for money." The test of getting this is surely an ultimate criterion of good design, organisation, workmanship and good will. This is particularly relevant at a time when new inventions, procedures and synthetic materials are constantly being revised and replaced. The eroding influence of "fragmentation" in the industry has been well underlined by the engineer Jan Bobrowski, whose articulate plea for greater integration at the design stage, between the appropriate professions and production firms, for the greater insistence on the production of relatively small manageable and efficiently jointed components, can ensure the maintenance of a human scale in the inevitable march of industrialisation. The brick, after all, is as old as building itself.

The need for far closer personal contacts between all members of the industry has never been greater.



The grandstand at Leopardstown Racecourse. The use of pre-cast H-frames as the main vertical structure produces an impressive and enforced elevation. Architects: Howard V. Cobb and Partners.

# Mixed signs for the professions

By ALEX GORDON, President, Royal Institute of British Architects

One of the unique features of the building industry is the range of consultancy services involved in its operation. Rightly these services come under close scrutiny from clients, and I mean clients in the widest sense from those who are on the one hand responsible for financing a building, to those, on the other, who have to live or work in it or with it. The concerns of the former are in the last resort for the structure completed within specified cost and time limits which meets operational and investment expectations. The concerns of the latter group are directed increasingly towards external and internal quality. These two concerns need not be mutually exclusive—both parties are increasingly recognising the others' interests and the professions have often transmitted this dialogue. If, as seems likely, the concern for environmental quality is to become more marked in an era where growth for growth's sake and the politics for expediency are viewed with more

scepticism, the mediation of the professions between these vested interests will become even more crucial.

## Building cycle

Construction demands massive resources and investment—national and private. What kinds of building process can best attempt to satisfy such disparate demands to meet often irreconcilable needs. The most immediate answer is to utilise fully the professions' contribution to all stages of the building cycle. However, one should be clear on just how their special skills can contribute most effectively. It seems apparent that apart from the professions' contribution as interpreter there is a need for the structure of consultant and building firms to mirror the scale and complexity of work available to them; the need for complete flexibility and adaptability to respond to client needs (in the wider sense I have described); the need for developing individual professional skills; the need for improved team working among the professions involved and acceptance at the highest level of adequate remuneration for the total design service on the principle that time spent at the investigation and design stages will result in a better end product at a lower cost.

It is interesting to note that the industry is in the main dealing with a mass of jobs valued at under £250,000. In 1966 this value group accounted for 97.8 per cent of the total. In 1970 this value group still accounted for 97.8 per cent of the total. The fact that since 1966 there has been no noticeable decrease in the number of small architectural practices (one-five architectural staff) and no significant increase in the number of larger practices (11 or more architectural staff) may well indicate that the size of architectural practices (and by the way the size of building firms) has reflected the number and size of jobs available and has shown the infrastructure of the profession and the industry is conditioned by client demands which are in turn con-

ditioned by prevailing economic circumstances.

The work of the RIBA's Intelligence Unit has indicated that an expected move towards larger architectural practices has not materialised. There has been some increase in size up to 1964, since then sizes have remained static. Nor does it seem that group practice has increased greatly. This is something of an over-simplification because in a rather typical way the architectural profession at least has managed to evolve alternatives which bring the benefits of group practice without the attendant disadvantages. Arrangements include group practice working for single jobs; firms sharing common partners and associations which can be mobilised for particular specialist needs. Yet another example of the adaptability and flexibility inherent in the consultancy system.

That the structure of the consultant professions should respond swiftly to macro and micro forces is hardly sufficient. They must also be capable of welding their contributions, design, structure, cost, internal environment etc., together in the building operation. The working procedures necessary to achieve this are only now developing and all is not right within the team itself. The service engineer (responsible for increasingly complex heating, electrical and ventilating systems) is now involved in up to 50 per cent of the design. Apart from the urgent need to attract the better recruits through chartered engineer status into building services engineering it is vitally important that better services advice at the strategic design stage and the requirement for greater detail on drawings must be reflected by increased fees for these activities. If this improvement in services engineering can be achieved the concept of a total design service can be realised.

## Scale fees

Fees are always a vexed issue. We have been, and are, criticised for insistence on scale fees. Much of the objection is doctrinaire and pays little attention to the consequences of a free for all. The prime virtue of such a scale is that clients are only faced with one variable (that is, service) and not two (fees and service). It is encouraging to note that the Government agreed revised Conditions of Engagement and fee scale with the RIBA earlier this year (discussion is still in progress on the Association of Consulting Engineers' scale).

The encouraging factors are the implicit acceptance by the Government of the value of the design service. The new conditions provide explicitly for time charges on stage B work (feasibility, investigation of alternatives) to ensure that a project is fully examined before it starts. This points a way out of the current enthusiasm for "lowest initial cost" buildings. The inadequacies of the "lowest initial cost" approach for permanent structures are all too clear. The alternatives—broadly higher initial cost for a longer and more adaptable life or the disposable building concept—need to be investigated thoroughly by all those involved in the industry. One of the most hopeful signs of recent years in inter-professional co-operation among the building professions was the founding of the Presidents' Committee for the Urban Environment earlier this year. The professions co-operate in the building process so why should not they co-operate in an official level? It is certain that the younger members of the professions have little time for protecting real or imagined boundaries between us. This official dialogue must extend to all areas of professional conduct—education, the environment and practice.

## Two extremes

We often forget that building is not an end in itself, only a means to an end. There are two extremes of building practice. First, the flamboyant master architect, concerned primarily with building as a monument or a piece of sculpture. Secondly, the package deal approach of to-day. Both approaches are concerned with the end, but with different means. At least, the package approach has given us a remarkable architectural heritage—full consequences of the package deal have yet to be established. Between these two extremes lies an enormous territory of public and private, hospitals, schools, etc., in which the architectural and building professions have come involved. Nowhere in the world can claim such a proportion of professional effort devoted to the built environment. In the last resort the total design service, independent consultants in areas of the building operation which will ensure that the end is treated as a means and will achieve the interests of the community client.

The professions are going to have a challenging time. External pressures on independence will continue to increase and may even be increased on the European. The signs, however, are hopeful. The prospect of interrelated education, continued flexibility of building structures, our impact co-operation in a total design service and the call for responsibility based on technical expertise and continuing competence should ensure the contribution from the professions to the industry will in greater demand and achieve even better results.

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# Europe—a hard look at investment strategy

BY JOHN TRAFFORD

**FILE THE** Government has a great deal more to get its Common market legislation through the Commons this winter, and would-be expatriates who want to know about income tax and other personal topics such as death duties—is an excellent handbook published by the Confederation of British Industry under the title "Taxation in Western Europe." Unfortunately the most recent edition was published in February, 1970, and relates very largely to the 1968-69 tax year.

## Undertaking

The Government has undertaken to abolish all controls on direct investment in other countries by the end of 1974. The present system, which requires export of funds to be repatriated, is being replaced by a new system which will allow companies to view more of the alternatives available in the Community. The Board has decided to bring the story right up to the end of 1971.

Even if a fully updated survey of West European taxation were available, understanding it and using it to calculate

the relative attractiveness of new investment of the various European countries would be a Herculean task. Before embarking on a really detailed feasibility study, it is obviously a great help to know whether the incentives to investment offered by the countries you favour are as good, better or decidedly worse than those available elsewhere in the enlarged EEC.

Of course, investment incentives are only one strand of the web of interacting factors which together influence the decision-making process. A Board will want to know about the availability and suitability of labour, the cost of manual labour and white collar workers (including welfare payments), energy costs, availability of raw materials, communications with the market to be served and pollution laws. This list could stretch on, depending on the nature of the company's business.

Any one of these factors can be decisive in the final choice of the location for the new investment. If, for example, the plant is labour intensive, the fact that welfare commitments add a further 92 per cent to an employer's wage bill in Italy but only 22 per cent in the U.K. is highly relevant.

In processes such as aluminium smelting or chlorine production, which consume immense amounts of electricity, a government's energy policy is crucial. Production costs of chlorine, a key chemical intermediate used

to make PVC plastics, dry cleaning solvents and a host of other products, can vary by £6 or £7 a ton just in western Europe. With selling prices in the £30 a ton range, this is a massive consideration.

Comparison of the incentives to investment meted out by the

1973 and, in his July Mini-Budget, cut Corporation Tax once again to 40 per cent, and strengthened the depreciation allowances in the non-developing areas.

Not surprisingly some of Britain's largest companies are becoming chary of believing too

is a help to know just how the government of the country used. Since interest rates vary, different rates were taken in some countries as well as a "standard" 9 per cent, allowing a precise theoretical comparison.

The table shows the theoretical profitability of some of these test cases expressed as the investment made in Belgium, France, West Germany, Italy, Ireland and the U.K.

Its main findings have in part at least been overtaken by events since it was first compiled in March last year (and revised in February, 1971). Even if the figures are, however, wholly accurate, they do at least point out some interesting differences between the various European countries and draw attention to the great importance of choosing the right way of financing the project.

To make the comparison, a plant costing £5m. was taken and a pattern of cash outflows and inflows assumed over its useful life, taken as 10 years.

Two cash flow patterns were evolved, one assuming that the plant was not a very profitable one, the other assuming that it earned profits at a good rate. The authors then went on to apply these cash flow patterns to the tax laws ruling in each of the six countries both in development areas and in non-development areas.

To round off the survey with a really comprehensive treatment, the authors also examined the effect of borrowing 25 and 50 per cent of the project's cost and also took the case

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ally encouraging for the development areas where unemployment levels of 7 per cent are commonplace and which may in the near future have to compete with the development areas of other Common Market countries to woo the rich investor.

## Alternatives

A wide range of alternative policies are open to the Government if it wishes to make investment in the high unemployment areas more attractive, including such devices as allowing more than 100 per cent of the capital value of a plant by way of depreciation allowances. However, if the Chancellor sticks to the present system of buying all his investment incentive eggs in the one basket of depreciation allowances, reductions (or increases for that matter) in corporation tax will have absolutely no effect on the after-tax DCF return on new capital plant in development areas.

What the operator gains in greater net cash flow when the plant is operative is precisely cancelled by the greater initial capital cost he has to bear through the reduced value of the 100 per cent free depreciation. The cash flows may be larger, but the plant has cost him more to build. Reducing corporation tax would certainly increase liquidity and hence funds available for investment, but it would do nothing to make actual investment in development areas more profitable.

## Smaller

The disparity between incentives in development and non-development areas, which has recently attracted a lot of Press comment because it has dwindled sharply since the Chancellor's budget last year, is much smaller in the U.K. than in any of the other countries. Furthermore, Mr. Barber in his measures last July reduced the differential even further by increasing the first year depreciation allowance on capital plant in non-development areas from 60 to 80 per cent.

If the fiscal rules really do have an impact on the tempo of investment, the present British showing is not especially

## Labour News

### Industrial relations: call for new Bill

ALEX HENDRY, LABOUR REPORTER

LABOUR PARTY has asked a series of joint talks with the TUC, the Labour Party's industrial relations Bill, which will replace the existing Industrial Relations Act, introduced by the present Government, when the Labour Party is in power.

The talks will have a double significance. They will help to restore the unity between Parliamentary and trade union leaders that dissolved during the arguments over "In Place of Strife" and prices and incomes policy. They will also help the TUC campaign against the existing Act. Mr. Feather has supported the unions' policy of non-cooperation on the grounds that the new Act will be replaced when Labour is returned to power.

If an outline of Labour's replacement can be produced fairly quickly it could be used as a propaganda weapon each time the new Act is seen to be having, from the trade unions' viewpoint, a harmful effect on their conduct of industrial relations.

A DELEGATION from the Blackburn and District Textile Trades Federation, which has 6,000 members, will take a petition to the Prime Minister at 10 Downing Street on Tuesday urging him to act to prevent further mill closures in Lancashire. Signatories for the petition, including those of 700 workpeople affected by closures announced during the past few days have been collected during the week-end.

Some 140 workpeople from three mills in the William Birtwhistle Mills group—Florence Mills, Blackburn Green Bank Mill, Preston Abbey Mill, Abbey Village—and 60 at the Gordon Mill of Robinson, Seed and Co., at Blackburn, will lose their jobs before the end of the year.

Local government unions bid for pay deal

ALEX HENDRY, LABOUR REPORTER

GOVERNMENT union the Scamp inquiry into the are to have one more dispute. This year the reaction to the 6.5 per cent offer has not been wide enough to judge if the manual workers are again prepared to challenge the Government's pay strategy. The employers have agreed to backdate any settlement to November 8, and this takes some of the heat out of the situation. But a spokesman for NUPE said yesterday: "Whatever the final offer from the employers, it will be put to delegate conferences to decide. It will have to stand up to the acid test of the membership's reaction."

More labour news, Page 11

Mid-Wales campaign to woo industry

Financial Times Reporter

MID-WALES Industrial Development Association this week launches a major publicity campaign to attract new industry to the area. A booklet setting out details of where advance factories are available is being sent to more than 5,000 Midland firms and to trade and commerce organisations.

### Mirage repurchase could hit Jaguar

BY ROBERT MAUTHNER

THE PROSPECT that France will buy back from Israel 50 Mirage fighter jets, on which General de Gaulle placed a delivery embargo after the six-day Arab-Israeli war in June, 1967, could affect French purchases of the Anglo-French Jaguar tactical support aircraft. This became clear at the weekend after the revelation that the negotiations between France and Israel on the repurchase of the Mirages have been going on here at senior official level since September.

No resale

Israel is apparently insisting that if it agrees to sell back the 50 Mirages, for which it paid in advance and which are being stocked on an airfield at Chatou in Central France, these must not be resold by France to any other foreign country, least of all an Arab State. This condition is likely to be fulfilled, since all the indications are that a decision in principle has already been taken that they will go to the French Air Force.

The affair has provoked speculation here that a recent decision by M. Michel Debre, the French Defence Minister, to postpone the conclusion of a contract for Jaguar aircraft for the French Air Force was directly related to the Franco-Israeli negotiations on the future of the 50 Mirages. The official explanation given at the time was that the contract was postponed to enable Rolls-Royce, which is building the Jaguar engines, to sort out its financial difficulties and to decide on a price for the engine.

It is highly probable that this was one of the subjects discussed by M. Maurice Schumann, the French Foreign Minister, during his visit to London last week, but

### Middle East Airlines plans U.K. expansion

MORE expansion in Britain is being planned by Middle East Airlines. Mr. Alan Kershaw, sales manager for the U.K. and Ireland, predicted yesterday that this year will see a record for the 25-year-old company in passengers carried between Britain and the Lebanon. In the first ten months of the year passenger figures were 15 per cent up.

The company is considering opening up a new U.K. route with flights from Beirut to Manchester. These may take advantage of the growing German tourist trade by calling at Frankfurt.

### First public offer in U.K. North Sea gas search

BY PETER RIDDELL

THE FIRST public offer for sale in a U.K. North Sea oil and gas exploration company is to be made this week. Ionian Bank is offering 1.5m. Ordinary 10p shares (a quarter of the issued capital) in Oil Exploration (Holdings) at 40p each, to raise £600,000.

Mr. Christopher Brett, a director of both the company and Ionian Bank, described the offer as "the first chance the small investor has had to invest in North Sea exploration direct without also being involved in other activities."

Oil Exploration, formed in 1964 by Ionian Bank and various clients and friends, has a 4.35 per cent stake in a consortium led by Phillips Petroleum which was set up to apply for licences and explore for oil and natural gas in the U.K. sector of the North Sea. Other members of the consortium include Petrofina, AGIP, Imperial Continental Gas Association, Tarmac and Courtlands.

Since 1968 the consortium, in conjunction with the Arpet group, has been supplying natural gas to the Gas Council from an area 18 miles or so north-east of Bacton on the Norfolk coast, now known as the Hewett Field.

Apart from its share of the rising income expected from the Hewett, Oil Exploration's prospects depend largely on the possibility of proving another major oil or gas find. In September, 1970, the consortium discovered oil about 25 miles west of

### Redevelopment of Liverpool city centre

In an attempt to improve the image of the centre of Liverpool, the City Council will be asked on Wednesday to spend more than £50,000 over the next three years providing trees, shrubs and flowers and paving over roads which are to become traffic-free precincts.

It is estimated that the redevelopment work will by then be completed. The scheme includes improved traffic sign posting, better street lighting and campaigns against litter and ugly hoardings.

### National petition against second channel for ITV

FINANCIAL TIMES REPORTER

A NATIONAL PETITION opposing allocation of a second television channel to the present ITV companies is to be launched. The decision was made at a week-end public meeting in London attended by Dr. Tom Margerison, former managing director of London Weekend Television, Mr. Tony Smith, former editor of "24 Hours", Mr. Stuart Hood, former BBC TV programme controller, Mr. John Gidding, Labour MP for Newcastle-under-Lyme, and Mr. Richard Neville.

The meeting elected an action committee, the TV4 Group, and a demonstration is to be staged outside the Independent Television Authority's headquarters in Brompton Road on Tuesday. Speakers at the meeting included members of the Bow Group, the Labour Party, the National Union of Teachers, the National Union of Journalists, the Association of Broadcasting Staff, the Association of Cinema, Television and Allied Technicians, the National Viewers' and Listeners' Association, the 76 Group, and the Free Communications Group. It was chaired by Mr. Alf George, an official of the Post Office engineering union.

### Bid to combat colour TV problem

LONDON WEEKEND and Granada Television, both major users of EMI 2001 colour TV cameras, have placed orders totalling £40,000 for EMI type 2113 auto-centring units to overcome the problem of registration drift, a characteristic of multi-tube cameras.

The units automatically monitor and adjust the picture centring of four-tube colour TV cameras. Said to be the first of their kind, EMI expects them to eliminate one of the operating engineer's major problems and provide a marked improvement in operating efficiency in colour TV broadcasting.

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Spencer Stuart & Associates invite you to have a talk about Australia and New Zealand as they really are: the problems as well as the opportunities, for the top executive coming from the U.K. or Europe.

Our side of the conversation is Guy Pease, a senior consultant from our Sydney office, who's here for a few months before returning permanently. He wants to meet top U.K. executives—the 50 or so who could be running Australian companies before long—and exchange views in a private discussion.

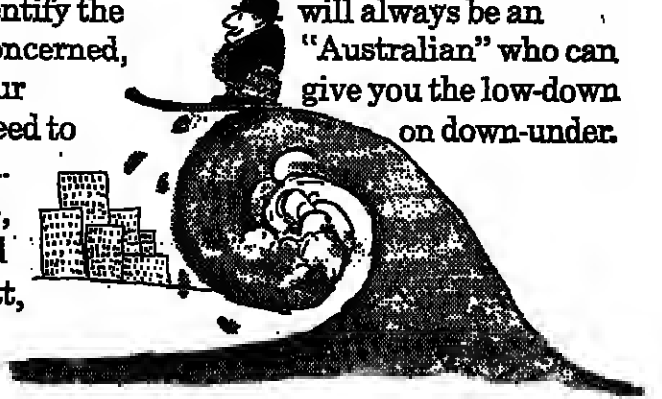
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INTERNATIONAL COMPANY NEWS + EURO MARKETS

If IET was abolished...

BY WILLIAM LOW

IT IS SOMEWHAT ironic that the new-found confidence in the dollar has not only provided the Eurobond market with a much-needed boost, but also may mark the beginning of the end of the Eurobond market as it is currently constituted.

A growing number of international bankers are giving serious thought to what will be the effects of a recovery in the U.S. balance of payments position. Should the U.S. move to a healthy surplus, the U.S. Government may well decide to abolish both the Interest Equalisation Tax (IET) and the Office of Foreign Direct Investment (OFDI).

The introduction of IET in 1963 effectively closed the New York capital market to foreign borrowers who, instead, turned to long-term dollar financing in Europe. It was this tax which was responsible for the birth of the Eurobond market. OFDI regulations, which restrict the flow of capital from the U.S. forced American corporations to use the Eurobond market as a means of financing foreign investment.

The disappearance of these measures might well result in a substantial portion of bond-raising currently carried out in the international capital market being diverted to New York. Although international investors would still subscribe to loans issued in New York, American institutions would certainly play a strong role in the purchase of dollar loans raised by non-U.S. borrowers. This, in turn, might mean that the second-market market in Europe would contract sharply.

Of course, an international capital market centred on New York would not necessarily result in the complete decline of the Eurobond market. Many borrowers would not be willing, or able, to register under the U.S. Securities Act, while the time difference would make the sort of European trading market to operate.

Meanwhile, the \$50m convertible offering by Honeywell has been for some time criticised as a number of "Euro" bankers and brokers are unhappy about a speech the Honeywell chairman made in the U.S. just as the Eurobond issue was completed. Part of the speech related to the difficulty Honeywell would have in matching the 1970 earnings figure. This information, the critics claim, was not made available in the Eurobond prospectus. It is certainly true that the earnings statement, as attributed

Henkel signs pact with USSR

By Christopher Lorenz

FRANKFURT, Nov. 14. HENKEL, the privately-owned West German detergent and plastics company, has signed a technical and economic co-operation agreement with the Soviet State Committee for Science and Technology. This is claimed to be the first West German-Soviet agreement to exchange information in the consumer goods field. It covers co-operation in the detergent, plastic and paper sectors, joint research and development, together with the exchange of licences.

Henkel said today that the deal should not be seen as a one-way affair. The Soviet side had plenty to offer, particularly in the chemical sector.

IN BRIEF

● BANCO DI ROMA, Commercial and Credit Bank, pointed out that the new office group in Sydney by the bank's group is a representative office and not a branch. The bank was wrongly reported last week that the bank had opened a Sydney branch.

● INTERNATIONAL TELEPHONE AND TELEGRAPH CORPORATION declared a quarterly dividend of 28 cents a share on Common stock payable on January 15, 1972, on record December 20. Dividend is at annual rate of \$1.12 per share.

● ESSO STANDARD, French subsidiary of Standard Oil (New Jersey) said sales rose to Frs.2.18m in first three quarters from Frs.2.12m, in same period last year.

● SHELL FRANCAISE net sales in first nine months this year rose to Frs. 3,225m. (2,519m.).

● CIMENT'S LAFARGE net sales in first nine months advanced slightly to Frs.41m. (50m.).

● NIPPON FUDOSAN Corp. will increase its capital from the present Yen 15,000m. to Yen 30,000m. early next year. New capital stock will be allotted to shareholders as of January 20 next year at the rate of two new shares to three old shares, with payment to be completed by March 30. Bank's stock par value is Yen 500.

● CHRYSLER Financial (formerly Simca) said net sales rose to Frs.7,922m. in first nine months (7,115m.).

● STET FRANCAISE DES NOUVELLES GALERIES REUNIES net sales rose to Frs. 1,680m. (1,587m.) in first nine months.

● EBAUCHES, of Neuchâtel, and the associate Biennet, holding 15% of the Swiss watch company, which together form Switzerland's biggest watch industry group, are to take up a majority shareholding in the watch group consisting of C. Des Montres Longines, of St. Imier, and Rotary, of La Chaux-de-Fonds. This move, which will leave the companies' present identity, is based on an agreement signed in January of last year and is intended to permit rationalisation in the commercial sector of activities.

MADRID STOCK EXCHANGE PRICES

Name of stock	Percentage of par value (Ptas.500)				
	High	Low	Close	Week	Div. Net
Altos Hornos de Vizcaya	95	93	93	-	4 5.00 5.37
Banco Central	988	983	988	-	6 11.97 1.21
Banco de Bilbao	887	880	887	+10	13.22 1.50
Banco de Vizcaya	787	778	787	-	6 11.33 1.63
Banco Espanol de Credito	738	732	738	-	8 9.93 2.63
Banco Hispano Americano	768	768	769	+1	12.01 1.56
Auxiliar Ferroviarias	114	110	110	-	4 7.00 3.36
Cia Ind. Agricolas	276	273	274	-	3 3.50 3.10
Cia Esp. Petroleros	375	369.5	375	-3.5	10.20 2.75
Cia Insular Nitrogeno	126	126	126	-	6.30 3.39
Cia Sevillana Electricidad	245	236.75	238	-7	5.00 3.99
Cia Telefonica Nacional	289	277	277	-2	8.97 2.91
Dragados y Construcciones	586	571	586	-	6 3.50 1.45
Ebro Cia Azu. Alcoholes	699	694	699	+5	13.00 1.94
Espanola del Zinc	118	117	118	-	5.10 2.75
Galeras Preciados	248.25	248.25	248.25	-	11.00 4.02
Hidroelectrica Espanola	313	313	313	+1	11.47 3.66
Iberdruero	306	298.75	306	+7.5	10.00 3.26
Industria Fenix Espanol	648	648	648	-	5 12.00 1.85
Min Sid Ponferrada	140	130	130	-10	6.66 3.12
SA Crea	185	182	185	-3	5.10 2.75
SA El Aguila	287	282.5	287	-4.5	3.30 3.30
SA El Turquesa	401	401	401	-	17 15.00 3.74
Artilleros Espanoles	70	68	68	-2	4.25 2.25
Sad Met. Duro Peligosa	67.25	66.50	66.50	-0.75	5.00 7.50
Sad Nat. Ind. Aplicacion	138	130	130	-8	8.00 6.10
Unio Expl. Rio Tinto	241	237	237	-4	10.20 4.35
Unio Expl. Rio Tinto	826	815	826	-11	3 10.75 1.30
Unio Expl. Rio Tinto	826	815	826	-11	3 10.75 1.30

Par values: Ptas.500 except \* Ptas.250. † Ptas.1,000. ‡ Ptas.150. \$ Ex coupon divided. † Ex rights coupon. Source: Banco Central Madrid.

CANADIAN WEEKLY LIST

Stock	Nov. 12	Nov. 11	Nov. 10
Alb. Gas Tr. Ltd.	47 1/2	47 1/2	47 1/2
Alcan. Aluminum	15 1/4	15 1/4	15 1/4
Alcan. Potash	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4

AUSTRALIA

Stock	Nov. 12	Nov. 11	Nov. 10
Admiral Australia	1.40-1.50	1.40-1.50	1.40-1.50
Admiral Australia	1.40-1.50	1.40-1.50	1.40-1.50
Admiral Australia	1.40-1.50	1.40-1.50	1.40-1.50
Admiral Australia	1.40-1.50	1.40-1.50	1.40-1.50
Admiral Australia	1.40-1.50	1.40-1.50	1.40-1.50
Admiral Australia	1.40-1.50	1.40-1.50	1.40-1.50
Admiral Australia	1.40-1.50	1.40-1.50	1.40-1.50
Admiral Australia	1.40-1.50	1.40-1.50	1.40-1.50
Admiral Australia	1.40-1.50	1.40-1.50	1.40-1.50
Admiral Australia	1.40-1.50	1.40-1.50	1.40-1.50

Indices

NEW YORK

DOW JONES AVERAGES

Close	Nov. 12	Nov. 11	Nov. 10
Industrial	1,234.56	1,234.56	1,234.56
Transportation	1,234.56	1,234.56	1,234.56
Utilities	1,234.56	1,234.56	1,234.56
Chemicals	1,234.56	1,234.56	1,234.56
Metals	1,234.56	1,234.56	1,234.56

STOCK AND BOND YIELDS

Nov. 12, 1971

Stock	Nov. 12	Nov. 11	Nov. 10
Industrial	1.23%	1.23%	1.23%
Transportation	1.23%	1.23%	1.23%
Utilities	1.23%	1.23%	1.23%
Chemicals	1.23%	1.23%	1.23%
Metals	1.23%	1.23%	1.23%

AUSTRALIA

MELBOURNE YIELD INDICES

Stock	Nov. 12	Nov. 11	Nov. 10
Industrial	1.23%	1.23%	1.23%
Transportation	1.23%	1.23%	1.23%
Utilities	1.23%	1.23%	1.23%
Chemicals	1.23%	1.23%	1.23%
Metals	1.23%	1.23%	1.23%

TOKYO

Nov. 12, 1971

Stock	Nov. 12	Nov. 11	Nov. 10
Industrial	1.23%	1.23%	1.23%
Transportation	1.23%	1.23%	1.23%
Utilities	1.23%	1.23%	1.23%
Chemicals	1.23%	1.23%	1.23%
Metals	1.23%	1.23%	1.23%

EUROPE

Nov. 12, 1971

Stock	Nov. 12	Nov. 11	Nov. 10
Industrial	1.23%	1.23%	1.23%
Transportation	1.23%	1.23%	1.23%
Utilities	1.23%	1.23%	1.23%
Chemicals	1.23%	1.23%	1.23%
Metals	1.23%	1.23%	1.23%

TEL AVIV STOCK EXCHANGE

Nov. 12, 1971

Stock	Nov. 12	Nov. 11	Nov. 10
Industrial	1.23%	1.23%	1.23%
Transportation	1.23%	1.23%	1.23%
Utilities	1.23%	1.23%	1.23%
Chemicals	1.23%	1.23%	1.23%
Metals	1.23%	1.23%	1.23%

HONG KONG

Nov. 12, 1971

Stock	Nov. 12	Nov. 11	Nov. 10
Industrial	1.23%	1.23%	1.23%
Transportation	1.23%	1.23%	1.23%
Utilities	1.23%	1.23%	1.23%
Chemicals	1.23%	1.23%	1.23%
Metals	1.23%	1.23%	1.23%

JOHANNESBURG

Nov. 12, 1971

Stock	Nov. 12	Nov. 11	Nov. 10
Industrial	1.23%	1.23%	1.23%
Transportation	1.23%	1.23%	1.23%
Utilities	1.23%	1.23%	1.23%
Chemicals	1.23%	1.23%	1.23%
Metals	1.23%	1.23%	1.23%

OVERSEAS SHARE INFORMATION

NEW YORK

RAILROADS

Stock	Nov. 12	Nov. 11	Nov. 10
Alcan. Aluminum	15 1/4	15 1/4	15 1/4
Alcan. Potash	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4

INDUSTRIALS, ETC.

Stock	Nov. 12	Nov. 11	Nov. 10
Alcan. Aluminum	15 1/4	15 1/4	15 1/4
Alcan. Potash	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4

RAILROADS

Stock	Nov. 12	Nov. 11	Nov. 10
Alcan. Aluminum	15 1/4	15 1/4	15 1/4
Alcan. Potash	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4

INDUSTRIALS, ETC.

Stock	Nov. 12	Nov. 11	Nov. 10
Alcan. Aluminum	15 1/4	15 1/4	15 1/4
Alcan. Potash	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4

RAILROADS

Stock	Nov. 12	Nov. 11	Nov. 10
Alcan. Aluminum	15 1/4	15 1/4	15 1/4
Alcan. Potash	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4

INDUSTRIALS, ETC.

Stock	Nov. 12	Nov. 11	Nov. 10
Alcan. Aluminum	15 1/4	15 1/4	15 1/4
Alcan. Potash	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4

RAILROADS

Stock	Nov. 12	Nov. 11	Nov. 10
Alcan. Aluminum	15 1/4	15 1/4	15 1/4
Alcan. Potash	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4

INDUSTRIALS, ETC.

Stock	Nov. 12	Nov. 11	Nov. 10
Alcan. Aluminum	15 1/4	15 1/4	15 1/4
Alcan. Potash	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4

RAILROADS

Stock	Nov. 12	Nov. 11	Nov. 10
Alcan. Aluminum	15 1/4	15 1/4	15 1/4
Alcan. Potash	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4

RAILROADS

Stock	Nov. 12	Nov. 11	Nov. 10
Alcan. Aluminum	15 1/4	15 1/4	15 1/4
Alcan. Potash	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4

INDUSTRIALS, ETC.

Stock	Nov. 12	Nov. 11	Nov. 10
Alcan. Aluminum	15 1/4	15 1/4	15 1/4
Alcan. Potash	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4

RAILROADS

Stock	Nov. 12	Nov. 11	Nov. 10
Alcan. Aluminum	15 1/4	15 1/4	15 1/4
Alcan. Potash	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4

INDUSTRIALS, ETC.

Stock	Nov. 12	Nov. 11	Nov. 10
Alcan. Aluminum	15 1/4	15 1/4	15 1/4
Alcan. Potash	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4
Alcan. Potash (Ft.)	15 1/4	15 1/4	15 1/4



**OFFSHORE AND OVERSEAS FUNDS (p\*\*\*)**

Yield %		Yield %	
1	100	1	100
2	100	2	100
3	100	3	100
4	100	4	100
5	100	5	100
6	100	6	100
7	100	7	100
8	100	8	100
9	100	9	100
10	100	10	100
11	100	11	100
12	100	12	100
13	100	13	100
14	100	14	100
15	100	15	100
16	100	16	100
17	100	17	100
18	100	18	100
19	100	19	100
20	100	20	100
21	100	21	100
22	100	22	100
23	100	23	100
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25	100	25	100
26	100	26	100
27	100	27	100
28	100	28	100
29	100	29	100
30	100	30	100
31	100	31	100
32	100	32	100
33	100	33	100
34	100	34	100
35	100	35	100
36	100	36	100
37	100	37	100
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39	100	39	100
40	100	40	100
41	100	41	100
42	100	42	100
43	100	43	100
44	100	44	100
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87	100	87	100
88	100	88	100
89	100	89	100
90	100	90	100
91	100	91	100
92	100	92	100
93	100	93	100
94	100	94	100
95	100	95	100
96	100	96	100
97	100	97	100
98	100	98	100
99	100	99	100
100			

[illegible]

Has. Tower Pl. E.C. 61-428 0081	Lion Ltd. For Pd. 83.2	-0.8	Prop. 0th Ag. Bds 511.1	Prudential Pension 151.1
Prop.Oct. 25/51.7 54.6	Lion Ind.Pd.Fd. 95.9	-0.5	Prop.Grbh.Mand. 10.0	Salmon Bk. SCIN 27.8
	Lion Prop. Fd. 55.1	----	Prop.Trd'g' Bds. 155.1	Salmon Bk. SCIN 27.8
Insurance-Lincoln Equity Assur. 61-556 3362	Irish Life Assurance Co. Ltd. 12. Finance Square, E.C. 21	61-556 3365		
Insurance Reg. W.C. 2 182.8	Prop.Mod'ln Novr. 111.5	120.5		
Prop.Oct. 25/ 182.8				

Nov. 3	Nov. 2	Nov. 5	A Year ago
79.34	72.18	79.05	68.78
78.67	78.46	78.69	70.74
60.01	49.04	49.41	35.15
57.78	48.44	45.8	33.8
58.89	5.91	3.92	5.14
5.05	6.12	6.15	7.85
50.50	16.34	16.30	13.77
51.17	11.905	10.318	9.449
2 p.m. 403.4			

Latest Index 91-264 5026

**S.E. ACTIVITY**

Kn.....	48	12	1.5	8.8	English & Nat. ....	35	13	8	5.9	18
dy (21)....	25	—	—	—	Bra Ring.....	18	12	1.7	—	—
38	18	4	5.2	—						—

Daily.....		
8-Edged.....	223.3	187.1
Interest.....	420.8	381.9
Commutative.....	171.5	168.4
als.....	267.7	247.9
ay eve.....		
8-Edged.....	807.1	187.2
Interest.....	403.6	391.3
Commutative.....	164.4	195.5
als.....	259.3	252.7

Ind. Ord. 1/1753. Gold Mines  
 pure.

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## VICE : NOTES

vice:—

based on or deferred. c Canadian.  
 based on prospectus or other  
 formats for 1971-72. \* Figures

22	80	—	—	—	Tyzack (W.A.) 10p	261	22	2.4	8.6	batings and rights a
J.S.	121 <sub>2</sub>	18	—	—	Wood (Ed.)	53	In Vol. Lq.	—	—	middle pr
W.P.	285	25	4.4	8.9	—	—	—	—	—	—

cluding refunds of U.S. Capital  
Figures based on prospectus  
official estimates for 1972.  
based on prospectus or other  
imates for 1970-71. \* Equiva-  
before additional capital  
up. † Figures based on pro-  
other official estimates for 1971.  
based on 1967 payments.  
assumed. ‡ No significant  
payable. § Dividend total to

[illegible]

dividend or forecast.  
 interim dividend, since paid,  
 was paid before.  
 loan stock issue  
 bid or reorganisation in  
 deposit certificates.  
 interim; reduced final and/or  
 earnings indicated.  
 offer for conversion of shares  
 ranking for dividends or rank-  
 ing for restricted dividend.  
 all equity capital ranks for  
 dividends.  
 does not allow for shares which  
 rank for dividend at a future  
 date.  
 p/e ratio usually provided.  
 final dividend declaration.  
 quotations.  
 value.  
 ex dividend; ex ex  
 rights; ex ex return



A copy of this Offer for Sale having attached thereto the documents specified below has been delivered to the Registrar of Companies for registration. Application has been made to the Council of The Stock Exchange, London, for permission to deal in and for quotation for the whole of the Ordinary Share Capital of the Company, issued and to be issued. The Application Lists for the Ordinary Shares now offered for sale will open at 10 a.m. on 18th November, 1971, and will close on the same day.

# OIL EXPLORATION (HOLDINGS) LIMITED

(Incorporated in England under the Companies Acts 1948 to 1967)

## SHARE CAPITAL

Authorised £600,000 in 6,000,000 Ordinary Shares of 10p each . . . . . Issued and to be Issued Fully Paid £600,000

At the close of business on Monday, 25th October, 1971, the total indebtedness of the Company and Oil Exploration Limited (which will become the Company's subsidiary) upon permission to deal in and quotation for the whole of the issued share capital of the Company being granted by The Stock Exchange, London) in respect of bank overdrafts and loans amounted to £228,794, all of which was unsecured. Save as aforesaid and apart from inter-company borrowings, neither the Company nor Oil Exploration Limited has any outstanding debentures, bank overdrafts or other similar indebtedness, mortgages, charges, hire purchase commitments or (other than in the ordinary course of business) any other material contingent liabilities.

## Ionian Bank Limited

Offer for Sale 1,500,000 Ordinary Shares of 10p each at 40p per share  
(Payable in full on application)

Copies of this Offer for Sale (incorporating Application Form) may be obtained from:

IONIAN BANK LIMITED, 64 Coleman Street, London EC2R 5BD; and

JOSEPH SEBAG & CO., 3 Queen Victoria Street, London EC4N 8DX, and 6 Bruton Street, London W1X 7AG.

Applications (which must be for a minimum of 200 Ordinary Shares or multiples thereof up to 1,000, or in multiples of 500, between 1,000 and 5,000, or in multiples of 1,000 between 5,000 and 10,000, and above 10,000 in multiples of 5,000) must be made on the application forms provided and be lodged with Ionian Bank Limited, New Issues Department, 25/31 Moorgate, London EC2R 6BA, together with a remittance for the full amount payable. Each application form must be accompanied by a separate cheque, drawn on a bank or a branch thereof in England, Scotland or Wales, and must be made payable to "Ionian Bank Limited" and crossed "Not Negotiable". All cheques may be presented for payment on receipt. Completion and delivery of an application form accompanied by the necessary cheque will constitute an undertaking that the cheque will be honoured on first presentation and attention is drawn to the declaration in the application form to the effect that the applicant understands this to be the case. If any application is not accepted the amount paid on application will be returned in full and if an

application is accepted for fewer shares than the number applied for, the balance of the amount paid on application will be returned, in each case by cheque through the post at the applicant's risk. The right is reserved to reject any application or to accept any application in part only and in particular to reject multiple or suspected multiple applications.

Arrangements have been made for the registration by the Company of the shares now offered free of stamp duty and registration fees in the names of the purchasers or of the persons in whose favour Letters of Acceptance have been renewed, provided that in cases of remittance Letters of Acceptance (duly completed in accordance with the instructions contained therein) are lodged for registration not later than 7th January, 1972. Share Certificates will be ready for issue on and after 4th February, 1972.

Acceptance of applications (including underwriting applications) will be conditional upon the Council of The Stock Exchange, London, granting permission to deal in and quotation for the whole of the Ordinary Share Capital of the Company (issued and to be issued) not later than 24th November, 1971. Money paid in respect of applications will be returned if such permission and quotation are not granted by that date, and in the meantime will be retained in separate accounts.

The Ordinary Shares now offered will rank for all dividends hereafter declared or paid on the Ordinary Share Capital of the Company.

Directors  
SAMUEL HAMBURGER (Chairman), 20 Finsbury Way, London, N.W.3  
THE HON. EDWARD DAVID GRANT DAVIES, Canningly, Tregent, Newtown, Montgomeryshire  
MALCOLM HUGH DEES MCALPINE, Highfields, Withyham, Hove, Sussex  
THE HON. CHRISTOPHER LUNEL BAULOU, 100, rue de la Harpe, Paris, France  
Secretary and Registered Office  
IONIAN BANK LIMITED, 64 Coleman Street, London EC2R 5BD

Bankers  
IONIAN BANK LIMITED, 64 Coleman Street, London EC2R 5BD  
LLOYDS BANK LIMITED, 15 Chancery Lane, London EC2M 4LL  
Solicitors to the Company and to the Offer  
ALLEN & OVERY, Chancery Lane, London EC2M 4LL  
Auditors and Reporting Accountants  
SPICER AND PEGLER, Chartered Accountants, 55-56 St. Mary Axe, London EC3A 8BJ

Brokers  
JOSEPH SEBAG & CO., 3 Queen Victoria Street, London EC4N 8DX, and THE STOCK EXCHANGE, LONDON.  
Registrars  
BARCLAYS BANK TRUST COMPANY LIMITED, Registration and New Issues Division, P.O. Box 122, 2 London Wall Buildings, London EC2P 2BU

The following is a copy of a letter addressed to Ionian Bank Limited by the Chairman of the Company, 12th November, 1971.

Gentlemen  
In connection with your Offer for Sale of 1,500,000 Ordinary Shares of 10p each of Oil Exploration (Holdings) Limited ("the Company"), I have pleasure in giving you the following information.

### HISTORY AND BUSINESS OF THE COMPANY

The Company is a public company and on 7th October, 1971, offered to acquire the entire issued share capital of Oil Exploration Limited ("OE") on a share exchange basis. At the date of the offer the offer has been accepted in respect of more than 98% of both the Preference and Ordinary Shares of OE and have been declared unconditional subject only to allotment and to quotation being granted by The Stock Exchange, London in respect of the shares of the Company to be issued pursuant to the offer. The Company intends to operate the provisions of Section 209 of the Companies Act 1948 to acquire the outstanding shares of OE which will then become a wholly owned subsidiary of the Company. The Company has similar objects to those of OE mentioned below.

### HISTORY AND BUSINESS OF OE

OE was incorporated as a private company on 27th February, 1964 and was converted into a public company on 22nd December, 1965, although no part of its capital has been quoted or dealt in on any Stock Exchange. The principal object of OE is to apply for concessions or licences to explore for and develop oil and natural gas deposits throughout the world, but in particular on the continental shelf of the North Sea. On 2nd July, 1964, OE entered into an agreement ("the Operating Agreement") with Phillips Petroleum Company ("Phillips") and others under which a consortium ("the Consortium") was formed with Phillips as Operator to apply for licences and explore for oil and natural gas in the U.K. sector of the North Sea. The members of the Consortium together with their participating percentages are as follows:—

	%
Phillips Petroleum Exploration U.K. Limited, a subsidiary of Phillips	35.00
Fina Exploration Limited, a subsidiary of Petrofina S.A.	30.00
AGIP Limited, a subsidiary of AGIP S.p.A.	15.00
Century Power and Light Limited, a subsidiary of Imperial Continental Gas Association	7.22
Plascom (1909) Limited, a subsidiary of Tarmac Limited	4.26
Halkyn District United Mines Limited, a subsidiary of Courtaulds Limited	4.26
OE	4.26

At about the same time Phillips formed other consortia of which OE is not a member to explore in areas of the North Sea outside the U.K. sector.

The terms of the Operating Agreement (and subsequent amendments thereto) enable OE as a member of the Consortium to participate within a defined area ("the Contract area") in any exploration programme or application for licences. The Contract area consists of the entire U.K. sector of the North Sea south of 59° and north of 51° with the exception of certain blocks in respect of which OE elected in January, 1970, not to participate in applying for licences (Contract No. (1) below). The Operating Agreement further provides that no member of the Consortium may attempt to acquire licences or concessions independently. Each member has the right to elect not to participate in the acquisition of a particular licence or concession, in which case its participating percentage is to be shared by the other members. If the members cannot agree as to the basis of acquiring a particular licence or concession, each of the parties has the right to apply to negotiate independently. Phillips as Operator is responsible to the Consortium for the management of all exploration and development activities subject only to the overall authority of the Operating Committee, on which all members of the Consortium have a vote proportionate to their participating percentage. Each member of the Consortium provides a share of all exploration and development expenses in proportion to his participating percentage, and in accordance with expenditure budgets laid down from time to time by the Operating Committee. Similarly, each member of the Consortium has a right to substantially the same conditions as those of the main Hewett Field contract. No charge is made by Phillips for technical expertise and know-how other than the cost of salaries, pay roll expenses and overheads attributable to the Consortium activities.

Since the Operating Agreement was signed the members of the Consortium including OE have been awarded a number of production licences under the Continental Shelf Act 1964. These licences originally covered a total of 25 blocks, the majority of approximately 240 sq. kms. each, on which a total of 20 "wildcat" or exploration wells have been drilled. A number of these blocks and parts thereof have now been relinquished under the terms of the licences.

In May, 1966, the Consortium's first well was completed and significant quantities of gas were discovered in a structure known as "Ann". Subsequent drilling has established that these quantities were not sufficiently large to warrant commercial development or, at any rate, not at the price currently obtainable from the Gas Council, to whom all natural gas discovered in the U.K. Sector of the North Sea must be offered for sale.

In February, 1967 the Arpet Group discovered natural gas in a block about 19 miles north east of the Norfolk coast. Subsequent drilling by the Consortium in an adjacent block to the south east revealed the existence of a substantial gas field, now known as the Hewett Field.

In March, 1969, after protracted negotiations, the Consortium entered into a long-term contract with the Gas Council for the sale of gas from the Hewett Field. This was the first such contract to be negotiated by any of the companies exploring in the North Sea.

Early in 1969 the members of the Consortium signed a "unitisation" agreement with the members of the Arpet Group under which the field is being developed as a single entity by Phillips acting as Operator and the net proceeds divided, 54.2 per cent. to members of the Consortium and 45.8 per cent. to the members of the Arpet Group. This gives OE a 2.30952 per cent. interest in the whole Hewett Field. Whilst the negotiations for these contracts were in progress, the Consortium and the Arpet Group were proceeding with the development of the Hewett Field facilities. These involved the construction of fixed platform for development wells, the laying of a 30-inch pipeline to shore and the construction of a plant at Saxon to process the gas before delivery to the Gas Council's plant nearby. By the summer of 1969 the major part of these facilities had been installed and delivery of gas to the Gas Council began on 12th July in that year. Meanwhile the Consortium had discovered further reserves of gas in areas some 5-10 miles north of the Hewett Field which extended into an area licensed to the Arpet Group; these reserves were also unitised with the Arpet Group on the same basis as the Hewett Field and, after further lengthy negotiations, terms were agreed with the Gas Council in April, 1971, for the sale of the recoverable reserves in these areas on substantially the same conditions as those of the main Hewett Field contract. The same facilities will be used to transport and deliver the gas.

Under the terms of the Gas Council contracts, the Gas Council has undertaken to purchase the entire estimated recoverable reserves of the Hewett and North of Hewett Fields ("Hewett") over a period of up to 25 years. Up to September, 1970, the members of the Consortium together with the members of the Arpet Group have undertaken to produce certain minimum annual quantities, and the Gas Council has undertaken to pay for such minimum quantities. Hewett reserves are to be re-determined by the 1st January, 1974, and from October, 1975, minimum annual quantities will be based on such re-determination of reserves. Hewett will not, in any event, reach full production until 1974 and based on operating experience to date, the Consortium and the Arpet Group expect it to remain on full production for between five and eight years thereafter and then to taper off gradually until production ceases to be economic by 1994. The contracts with the Gas Council also provide some degree of protection against monetary inflation by means of revisions at three-yearly intervals of the initial sale prices based on indices reflecting changes in industrial costs and in the prices of competitive fuels. The first such revision will take place in 1972.

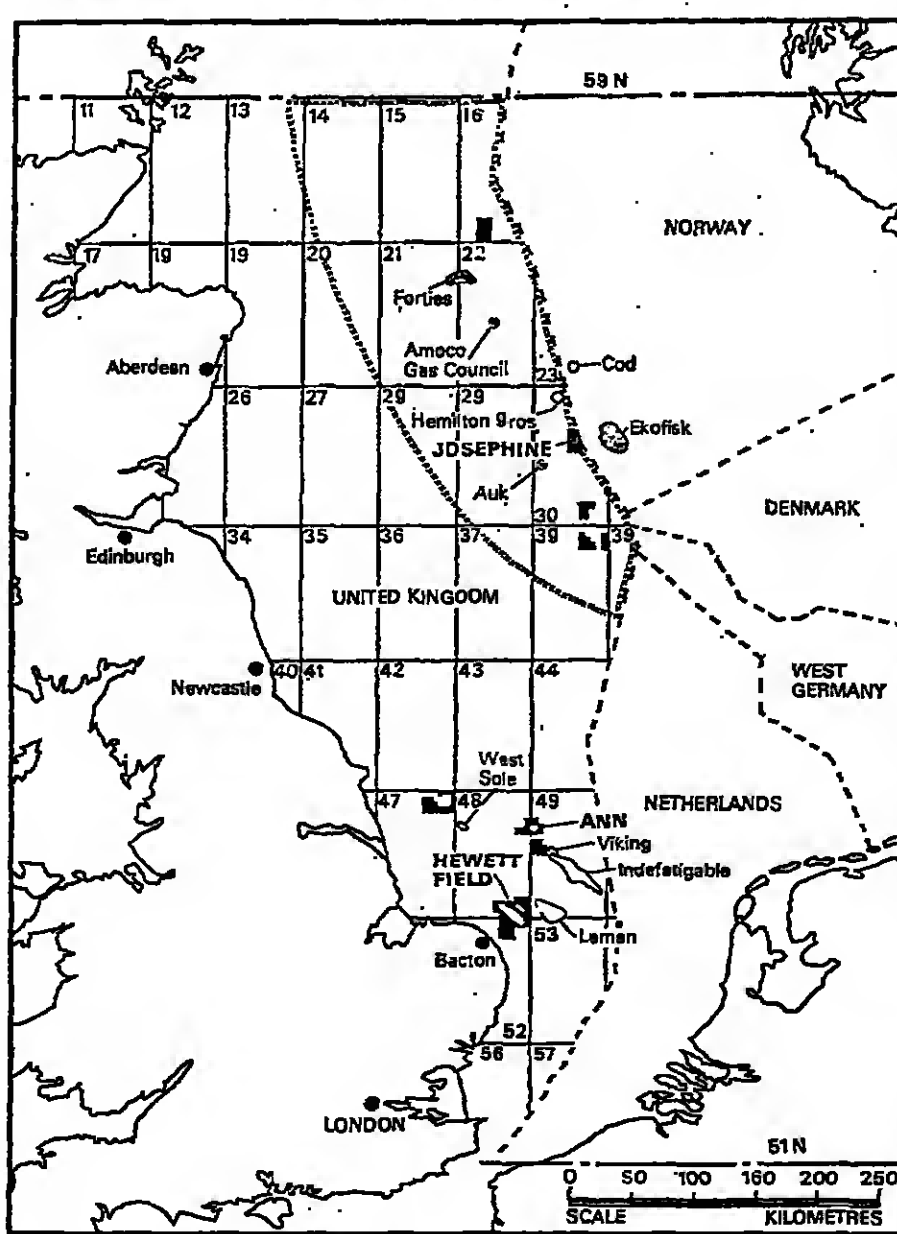
Since the beginning of 1970 a number of important oil discoveries have been made in the North Sea. In May of that year, Phillips, as Operator for another consortium of which OE is not a member, discovered the Ekofisk field in Norwegian waters, which, on the basis of its estimated reserves, appears to be one of the largest off-shore fields in the world; in October, 1971, BP and Shell-Eso having drilled in adjacent blocks in the U.K. sector announced the discovery of a major oil reservoir known as the Forties Field.

In September, 1970, the Consortium of which OE is a member discovered oil in the U.K. sector about 25 miles west of Ekofisk on a structure known as "Josephine". Owing to technical difficulties the find could not be properly tested. The Consortium plans to drill at least one further well in 1972 to ascertain the importance of this discovery.

In August, 1971, OE as a member of the Consortium participated fully in the Consortium's applications within the Contract area for licences which were offered at that time by the Department of Trade and Industry ("the DTI"). Fifteen "premium" blocks were offered for licence by means of tender. The Consortium submitted tenders for three of these and was awarded one—block 18/27, for which the Consortium's successful tender was £637,666. OE's 4.26 per cent. share being £27,165. At the same time, the Consortium applied for a total of 22 other blocks, all of which are within the area indicated on the map. The outcome of these applications will probably not be announced until early in 1972, at which time licences will be awarded mainly on the basis of exploration programmes negotiated with the DTI, no "premium" being payable.

OE's present interests in the U.K. sector of the North Sea can be summarised as follows (see map):—

- A 2.30952 per cent. interest in the following blocks which contain Hewett:—  
48/28 (part) 52/4  
48/29 (part) 52/6 (part)  
48/30
- A 4.26 per cent. interest in the following blocks:—  
16/27 (The "premium" block referred to above) 47/4 (part)  
30/13 (Josephine) 47/6 (part)  
30/28 (part) 48/10 (part)  
30/29 (part) 49/6 (part)  
38/5 (part) 49/11 (part) Ann
- A 4.26 per cent. interest in the applications mentioned above for 22 blocks.



AREAS IN WHICH OE HAS AN INTEREST THROUGH ITS PARTICIPATION IN THE CONSORTIUM

Oil fields	Oil discoveries	Gas fields	Gas and gas condensate discoveries
1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24
25	26	27	28
29	30	31	32

The numbers are shown on the map as divided into numbered blocks as follows:

**MANAGEMENT**  
All the Directors of OE were appointed Directors of the Company on 28th September, 1971. All the Directors of OE and the Company are non-executive Directors, and receive no remuneration. I am aged 53, and have been Chairman of OE since its formation. I am a director of Ionian Bank Limited.

The Hon. E. D. G. Davies, aged 48, was appointed a Director of OE on 24th November, 1964. He is Chairman of National Carbonising Co. Limited, and a director of other companies. Mr. M. H. O. McAlpine, aged 54, was appointed a Director of OE on 24th November, 1964. He is a director of Sir Robert McAlpine & Sons Limited and other companies. The Hon. C. L. B. Brett, aged 34, was appointed a Director of OE on 30th July, 1969. He is a director of Ionian Bank Limited and other companies.

Under a Management agreement expiring in 1974, Ionian Bank Limited manages and conducts OE's business, provides office and secretarial facilities and advises on financial matters. Accordingly, neither the Company nor OE has any executive or other staff. Since shortly after its formation OE has had available, when required, the services of Dr. T. C. Richards, a petroleum exploration consultant.

**WORKING CAPITAL**  
In general it is the Directors' policy to finance Hewett development expenditure and all exploration expenditure out of the Company's existing cash flow. So far as any other development expenditure is concerned, it is not practicable at this stage to estimate the amounts which might be involved but having regard to the continuing cash flow arising from Hewett and to the fact that no development would be contemplated unless the Consortium had fully proved a new oil or gas field, the Directors believe that suitable arrangements could, if necessary, be made to enable the Company to finance its share of development expenditure.

On this basis and taking into account the net proceeds, estimated at £370,000, of the issue of 1,050,000 of the above Ordinary Shares, the Directors are of the opinion that the Company will have sufficient working capital for its foreseeable requirements.

### PROFITS, PROSPECTS AND DIVIDENDS

The Accountants' Report in the Offer for Sale indicates the results over the first seven years of OE's operations during which time it has been exploring for oil and gas, and since 1969, developing the Hewett Field. The losses in the early years are almost entirely due to OE's practice of writing off exploration expenditure in the year in which it is incurred.

Sales of natural gas began in July, 1969, and these sales constitute at the present time OE's main source of income. In the two years ended 30th September, 1970 and 1971, gas sales were 105% and 115% respectively of the minimum annual quantities under the Gas Council contracts. In the year 1970 OE made a profit for the first time, and in the six months ended 30th June, 1971, it made a profit of £117,000 before charging net interest payable and exploration expenditure, and £96,000 after charging these items.

As stated above, sales of gas from Hewett are expected to increase substantially during the years 1972 to 1974 and to reach a plateau at that point, followed by a gradual decline from about 1980 to 1989, at which latter date recoverable reserves will have been exhausted. The Directors anticipate that subject to any unforeseen circumstances, the average annual net profits before tax of OE arising from Hewett for the six years from 1974 to 1979 will be approximately £400,000. The corresponding figure for the year 1971 is estimated at not less than £220,000. No allowance has been made in these figures for income or exploration expenditure arising outside Hewett nor for interest payable or receivable by OE. Apart from its share of the rising income from Hewett, OE's future prospects depend to a great extent on the possibility of proving another major oil or gas field. OE is fortunate in being a member of a Consortium with Phillips Petroleum Company as operator and Petrofina and AGIP as partners. These three major international oil companies have a wealth of experience, and their record of success in the North Sea has been outstanding. The U.K. sector of the North Sea is now regarded by the oil industry as one of the most attractive and promising areas for oil exploration in the world, and OE, as a member of the Phillips Consortium, is well placed to take advantage of the situation.

As far as the existing oil find on block 30/13 (Josephine) is concerned, tests were made after the discovery well on this structure had been drilled. Under these tests the well flowed oil of 32 degrees API gravity at the rate of 800 barrels per day from a sandstone reservoir below 12,000 ft. There appear to be other hydrocarbon bearing zones both above and below the tested interval, but these could not be tested conclusively on account of technical difficulties. At least one and possibly two further wells will be needed before it is possible to obtain any indication of the amount of the reserves and whether or not they will be capable of commercial development. The Consortium plans to drill the first such well in the spring or summer of 1972, and accordingly there is unlikely to be any further information on Josephine before about June, 1972. Although the structure lies some 200 miles east of the Scottish coast the considerable cost of development could well be justified if the transportation facilities of neighbouring fields can be shared.

Meanwhile, further exploration work remains to be done on the Consortium's existing licence areas on block 16/27—the "premium" block—and on any further blocks which the Consortium may be awarded as a result of its 1971 applications covering 22 blocks. Based on its own seismic information and the experience of other Groups operating in the North Sea, the Consortium believes that the area within which the 1971 applications were made has excellent oil bearing prospects, and that block 16/27 in particular may be capable of commercial development.

The Directors of OE estimate that, in the absence of unforeseen circumstances, the net profit for the year ending 31st December, 1971, after charging loan interest, exploration expenditure (including the premium of £27,196 in respect of block 16/27 mentioned above) and all other expenses, will be not less than £190,000. No corporation tax will be payable on these profits because of losses brought forward from previous years. On the basis of this estimate it would be the intention of the Directors of Holdings to declare a dividend of 15 per cent. (15p per 10p Ordinary Share) in respect of the period ending 31st December, 1971, payable in May, 1972.

The increasing scale of profits from Hewett over the next three years should enable appreciably higher rates of dividend to be paid in the future, despite the fact that expenditure will be incurred on exploration outside Hewett.

The forecast net profits for the year ending 31st December, 1971, would be appropriated as follows:

Net profit available for Ordinary Shareholders	160,000
Less: Cost of dividend at 15 per cent. on the issued share capital of £600,000	(90,000)
Retained profit	70,000

On this basis and at the offer price of 40p per Ordinary Share, the price earnings ratio is 15 and the dividend yield 3% per cent., covered 1.4 times. On the basis of a full corporation tax charge of 40 per cent., the price earnings ratio would be 25.

Yours faithfully,  
S. HAMBURGER,  
Chairman

### ACCOUNTANTS' REPORT

The Directors,  
OIL EXPLORATION (HOLDINGS) LIMITED  
and  
IONIAN BANK LIMITED,  
Gentlemen,

- Oil Exploration (Holdings) Limited ("Holdings") was incorporated on 22nd September, 1971, and has not commenced to trade. On 7th October, 1971, Holdings made offers to the shareholders of Oil Exploration Limited ("OE") for the acquisition of all the issued share capital of OE in exchange for shares in Holdings. The offers have been accepted in respect of more than 98 per cent. of each class of share and the Directors have declared the Offer to be conditional subject to permission to deal in and for quotation for the whole of the Ordinary Share Capital of Holdings necessary to implement the Offer being granted by the Council of The Stock Exchange, London. Holdings is now a public company and has undertaken to acquire the outstanding shares under the provisions of section 209 of the Companies Act 1948, and to operate the provisions of that section in relation to the shares so acquired.
- OE was incorporated on 27th February, 1964, and was converted into a wholly-owned subsidiary of Holdings on 22nd December, 1965. We have examined the accounts of OE for the period from 1st July, 1964 to 30th June, 1971, and have set out as Auditors throughout this period.
- OE is a 4.26 per cent. interest in a Consortium, led by Phillips Petroleum Company ("Phillips") which was formed in 1964 to explore for, develop and sell oil and natural gas reserves in the North Sea. The Consortium has produced from Hewett is, and will continue to be, sold under contract to the Gas Council whilst the small volume natural gas from product is sold under contract to another party.

### PROFITS

4. The profits (losses) of OE for the seven years ended 30th June, 1971, are shown in column (4) below. The principal bases of accounting adopted by OE are set out in paragraph 5 below.

(1) Period	(2) Net interest received (paid)	(3) Exploration expenditure	(4) Profit (loss)
Year ended 30th June, 1965	22,611	48,139	(25,528)
Year ended 30th June, 1966	26,302	76,880	(50,578)
Year ended 30th June, 1967	20,508	107,383	(86,875)
Year ended 30th June, 1968	8,627	105,012	(96,385)
18 months ended 31st December, 1969	(53,018)	105,012	(105,203)
Year ended 31st December, 1970	(47,233)	30,117	(16,227)
Six months ended 30th June, 1971	(13,667)	6,776	(6,891)

- The principal bases of accounting adopted by OE in respect of its share of the Consortium income and expenses are as follows:—
  - Expenditure in respect of seismic survey, the interpretation and mapping thereof and the drilling of exploration wells is classified as exploration expenditure and written off as incurred.
  - Development expenditure (being expenditure incurred on platforms, pipelines, shore establishments, processing equipment) is capitalised and depreciated in the proportion which sales in each accounting period bear to the estimated gross sales proceeds recoverable from the Gas Council over the life of the field.
  - Investment grants receivable have been deducted from both exploration and development expenditure.
  - It is not practicable at each accounting date to establish details of the Consortium's incurred expenditure, accordingly OE's share of exploration and development expenditure is included on a cash basis.
  - The profits (losses) shown in column (4) above are arrived at:—
    - before charging depreciation;
    - after charging interest payable and crediting interest receivable as shown in column (2) above;
    - after charging amounts written off in respect of exploration expenditure (less the relevant investment grant) as shown in column (3) above;
    - December, 1970, of £8,078; and for the six months ended 30th June, 1971, of £7,441;
    - after reclassifying and apportioning as capital expenditure certain expenses previously regarded as exploration expenditure;
    - No Directors' remuneration has been paid by OE.
    - Royalties are payable to the Department of Trade and Industry in respect of both gas and natural gas with the Department. The amounts charged in arriving at the results shown in column (4) above were period end 31st December, 1969, £3,690; year ended 31st December, 1970, £13,947; and half-year ended 30th June, 1971, £11,365, and are the Directors' estimate of the amount which will become payable in respect of those periods. Further information available indicates that the basis will finally be agreed in 1972 but that any variation in the amounts will not be material.







# SINGER & FRIEDLANDER LIMITED

Payable in full on application of

("Aida")

**Issued and now being issued fully paid**  
**£300,000**

If any application is not accepted the amount paid on application will be returned in full and, if any application is accepted for fewer shares than applied for, the balance of the amount paid on application will be returned by cheque through the post, in either case at the applicant's risk.

Copies of this Offer with Application Forms can be obtained from:—

**Solicitors**  
*To the Aspynt*  
**SHACKLOCKS & COMSTON HILL**  
Pearl Assurance House, Friar Lane, Nottingham, NG1 6BX  
**JACKSON & MOSS;**  
Malin House, St. Mary Street, Ilkeston, Derbyshire DE7 8BH  
*To the Office,*  
**SLAUGHTER AND MAY**  
35 Basinghall Street, London, EC2V 5DH  
**Auditors and Reporting Accountants**  
**PEAT, MARWICK, MITCHELL & CO.** (Chartered Accountants)  
11 Ironmonger Lane, London, EC2A 2AR  
and Eldon Chambers, Wheeler Gate, Nottingham, NG1 2NS  
**Secretary and Registered Office**  
**REX STDNE, A.C.A.**  
Heanor Gate Industrial Estate, Heanor, Derbyshire, DE7 7RG  
**Registrars and Transfer Office**  
**SINGER & FRIEDLANDER LIMITED**  
Sbourne House, 34 Beckenham Road, Beckenham, Kent BR3 4TU

Additional turnover was being obtained and this, together with the general deterioration in trading conditions, is reflected in the results of Alida for its financial year ended the 31st March, 1971 (which nevertheless showed an increase in profits before taxation of 44 per cent, over the previous year) and for the first six months of its current financial year. Over the last two months the order intake has increased substantially, as a result of which the additional productive capacity is being utilized more fully and increasing benefits are being obtained from the investment.

Present productive capacity is capable of handling turnover in the region of £2,500,000 per annum. Additional machinery is on order which will increase Alida's capacity still further and existing factory space is sufficient to maintain turnover at a rate substantially above that forecast for the current financial year; in addition, Alida's adjacent land is available for further expansion and there is currently no shortage of labour in the Humber area.

The following chart shows the growth in Alida's turnover from the date of its incorporation to 30th September, 1971, together with the forecast turnover for the six months to 31st March, 1972.

Year	First Six Months of Financial Year	Second Six Months of Financial Year
1967	~100	~100
1968	~150	~150
1969	~250	~250
1970	~400	~400
1971	~600	~600
1972 (Forecast)	~700	~700

The above chart (other than the forecast for the six months to 31 March, 1972) is based on the figures contained in the accounts for the period for which it will also be seen that Alida's profits before taxation increased from £428,000 in the six months to 31 March, 1971, to £628,000 for the year ended 31 March, 1971. Profits before taxation for the six months ended 30th September, 1971, based on Interim audited accounts for that period, were £123,711. In the light of Alida's expanded production capacity and the increased sales being achieved, the Directors are of the opinion that, in the event of continued favourable trading circumstances, Alida's profits before taxation for the year ending 31 March, 1972, will be not less than £280,000.

On the basis of the profits forecast above and of corporation tax at 40 per cent., it is the Directors' Intention that the corporation tax payable in or about July, 1972, of an ordinary dividend for the year ending 31 March, 1972 of about 10 per cent. less than £100,000, will be paid in or about July, 1972. The Directors would expect to recommend a final dividend in respect of a full year of profits not less than 34 per cent. of the year less tax payable by way of an interim dividend in or about January and a final dividend in or about July.

**DIVIDEND YIELD, PRICE EARNINGS RATIO AND COVER**

For the purpose of illustration, assuming corporation tax at 40 per cent. and dividends totalled 34 per cent., the must profits before taxation of £280,000 would be appropriated as follows:—

£

Profits before taxation	280,000
Less: corporation tax at 40 per cent.	112,000
	<hr/>
Profits after taxation	168,000
Dividends (gross) of 34 per cent. on £300,000 ordinary share	

capital would absorb

	102,000
Leaving for retention in the business	<u>66,000</u>

On this basis, at the Offer Price of 84p per share, the gross dividend yield would be 4.05 per cent, the dividend could be covered 1.3 times, and the price earnings ratio would be 15.

**ACCOUNTANTS' REPORT**

There is set out below a copy of a report received from Peat, Marwick, Mitchell & Co., the Auditors and Reporting accountants.

to the Directors,

of Packaging Co. Limited and  
Major & Friedlander Limited.

undermen,

Y11th November, 1971.

Our consolidated financial statements are prepared on the basis of the accounting records of the Group, which include the accounts of the Group and the accounts of its subsidiary companies, both of which are wholly owned. Aida and its subsidiaries are hereinafter referred to as "the Group". We report as follows:—

**Turnovers and Profits** The combined turnover and profits of the Group, arrived at on the basis stated in (i) below, were as follows:—

Year ended 31st March (1)	Combined Turnover (2)	Combined profits before depreciation and taxation (3)	Depreciation (4)	Combined profits before taxation (5)
1966 (51 weeks)	£ 67,157	£ 14,004	£ 1,009	£ 12,926
1967	144,846	19,144	3,803	15,341
1968	267,003	25,141	7,958	21,083
1969	406,370	95,134	14,370	80,764

1970	785,817	168,104	28,614	139,480
1971	1,402,780	240,124	39,335	200,789
8 months ended 30th September, 1971	908,891	150,575	26,964	123,711

Notes:

The combined profits shown in Column [9] above are stated before providing taxation, but after charging all the amortizing expenses, depreciation, interest and directors' emoluments and after making such adjustments as we consider appropriate.

The valuation of stocks and work in progress at accounting dates up to and including 31st March, 1969 are not now available although we understand that a physical inventory was undertaken at each accounting date. We have therefore been unable to satisfy ourselves that such stocks and work in progress were valued on consistent bases and therefore cannot confirm the allocation of the aggregate profit achieved over the period to the various shareholders on the basis of the return on the return accounts for the periods. However, the auditors during that period, Messrs. H. W. Gennan & Co., Chartered Accountants, have

Depreciation is not provided on freehold property. Depreciation (calculated with quarterly rates) is provided: (a) on motor vehicles at 25% per annum on cost; (b) on fixtures and fittings at 12% per cent. per annum on cost; (c) on motor vehicles at 25% per cent. per annum on cost and (d) on fixtures and fittings at rates of 10 per cent. and 5 per cent. per annum on cost. Depreciation allows on allium (a) above and on fixtures and fittings (b) under the Investment Grants Accounting on the basis of the following rates:

The emoluments of the directors of Alike amounted to E14,734.38 in the year ended 31st March, 1971 and E10,217 in the six months ended 30th September, 1971; had the present arrangements been in force the amounts payable would have been E14,734.38 and E10,217 respectively.

**Net Tangible Assets** The following is a statement of the net tangible assets of Alike and of the Group partnership, based on the audited balance sheets at 30th September, 1971 after making such adjustments as we have made to the balance sheets of the Group partnership for the year ended 30th September, 1971 and for the six months ended 30th September, 1971, as set out in the Ordinary shares of 10p each at 50p share and after deducting the estimated expenses of the Offer for Sale.

Alike	The Group
£	£
Fixed Assets	
Freehold property	
Depreciable fixed assets	
Current assets	
Other	
Less: Estimated expenses of the Offer for Sale	
Net Tangible Assets	

£	£	Fixed Assets	£	£
	4,447	Freehold property		
	316,800	at cost	4,447	
320,947		at valuation (Note (i))	316,800	320,947
	408,588	Plant, machinery, fixtures and fittings (at cost) ..	408,588	
301,847	108,741	Less: Depreciation .. .. .	108,741	301,847
	38,587	Motor vehicles (at cost) .. .. .	38,587	
	15,844	Less: Depreciation .. .. .	15,844	
22,743				22,743
845,537		Less: Mortgage on one freehold property	13,158	845,537

59,708	47,555	None (b)(7)(C)	47,555	59,708
		Hire Purchase commitments (Note (h))		
595,529				595,529
		Interest in Subsidiaries		
	2,000	Shares at cost .. .. .	-	
	(44,254)	Less: Amount due to subsidiaries .. .. .	-	
(42,254)				
543,555				595,529

copy of this Offer for Sale, having attached thereto the documents specified below, has been delivered to the Registrar of Companies for registration.

United Kingdom consumption of low-density polythene in film and sheet					
Calendar Year	1965	1966	1967	1968	1969
Tons	54,800	76,700	87,500	106,700	131,000

The above table has been compiled from figures published by the magazine "British Plastics".

Low-density polythene is normally used as a loose wrapping, but increasing use is now being made of a type of low-density polythene film which is suitable for "shrink-wrapping" by increasing the application of heat this type of film is found to shrink to around one-third of its original size. This shrink-wrap is now being used, in particular, for packaging many types of food. Another aspect of the industry is the increasing interest in the use of packaging materials made from high-density polythene, which has qualities similar to tissue paper but is stronger.

The business of the partnership was conducted from premises on the outskirts of Nottingham but shortly after the incorporation of Aldia large premises were acquired at Ilkeston, Derbyshire, where in addition to the original premises Aldia began the conversion into bags of polythene film purchased from outside suppliers. The premises at Ilkeston proved too small for the expanding business and in September, 1967 it was moved again to a freehold factory and office block at Heanor Gate Industrial Estate, Heanor, Derbyshire; during the following year further fixtures and equipment were purchased which enabled Aldia to commence manufacturing its own polythene film raw material and in 1970 and early 1971 adjacent land and premises were acquired to allow for the further expansion of the business.

small proportion of Alida's production of low-density polyethylene is already used for airtank-wrapping, a market which the Orectors consider will become more important. Alida has carried out production trials with high-density polyethylene but the Orectors consider that production of the material from the machinery currently on the market would not be sufficiently profitable. Alida intends to purchase machines which are now being developed for the production of high-density polyethylene. The Orectors consider that the main sources of supply of polyethylene are the major petro-chemical companies. Although during the six months ended 30th September, 1971, Alida purchased approximately 80 per cent. of its requirements from two suppliers, it has no long term buying arrangements and is thus able to maintain an independent and highly flexible buying policy.

tools, stationary and hardware, other important uses are in the engineering, pharmaceutical and chemical structure and motor industries. Alkida also supplies numerous regional hospital boards and local authorities. In the month ended 30th September, 1971, no one merchant or other customer accounted for more than 4 per cent of Alkida's sales. Customers include:-

The Boots Company Limited	John Player & Sons
N. Corder (St. Martin) Limited	Dunlop Hosiery (Singapore) Limited
Littlwoods Mail Order Stores Limited	Raleigh Industries Limited
The Nestlé Company Limited	Key Keratin Limited (a subsidiary of
Spicer-Cowan Limited	Reed International Limited)

any (including all those acquired since 1st April, 1971) have been purchased outright. It is a cornerstone of Alida's policy to take immediate advantage of significant technical improvements in machines for bag-making and printing machines are depreciated over five years and the extruding machines over eight years. The policy of depreciation intended to enable Alida to replace machines swiftly in accordance with the position in the market. On 1st November, 1971, Alida had on order new plant costing in aggregate approximately £108,000 for the period to the end of the period to 31st July, 1972.

### PREMISES

Alida occupies two adjacent freehold premises at Hemor Gate Industrial Estate, Hemor, Ceredysyre. None of the

**MANAGEMENT AND STAFF**

Dr. R. H. Morley is 41 years of age and was a co-founder of the business. He is the Chairman and Managing Director and is responsible for long-range planning and overall policy.

Mrs. H. A. Coward, also a co-founder, is 39 years of age. He is the Works Director and is responsible for production management.

Mr. E. Stone, who is 33 years of age, joined Alida in May, 1968. He is the Financial Director and Company Secretary.

Miss Margaret, who is 23 years of age, joined Alida in July, 1968 and is the Sales Director.

staff are excellent. Alide is considering the introduction of a pension and life insurance scheme.

**PROCEEDS OF ISSUE**

The net proceeds of the subscription of 350,000 new Ordinary Shares of 10p each by Singer, a Firstland resident (Contract (13) below) are estimated to amount to £243,865. Of this sum £80,000 will be applied to redeeming a secured loan from Alide's bank and the balance will be available to reduce Alide's bank overdraft on the purchase of new plant. Taking into account the estimated net proceeds of this issue and the bank overdraft facilities available to Alide, the Directors are of the opinion that Alide has sufficient working capital for its present requirements.

**THE DIRECTORS AND SHAREHOLDERS**

**PROFITS, PROSPECTS AND DIVIDENDS**

Historic and current trends in the packaging industry suggest that demand for Alka's products will continue to grow. Accordingly in November, 1963, the Directors decided upon a substantial investment programme. This involved doubling the accommodation then available and the acquisition of 27 new machines by 30th September 1965; in addition by March, 1971, the number of employees had been increased to the level required to handle turnover at the rate of £2,000,000 per annum. The short-term effect was to reduce profit margins while the expected

together with the forecast turnover for the six months to 31st March, 1972.

**SALES**

▨ FIRST SIX MONTHS of FINANCIAL YEAR

▭ SECOND SIX MONTHS of FINANCIAL YEAR

Year ended 31st March	First Six Months (£m)	Second Six Months (£m)
1966	~10	~10
1967	~20	~20
1968	~30	~30

The above chart (other than the forecast for the six months to 31st March, 1972) is based on the figures contained in the Accountants' Report, from which it will also be seen that Alida's profits before taxation increased from £428,000 in the five weeks ended 31st March, 1966 to £200,789 for the year ended 31st March, 1971. Profits before taxation for the six months ended 30th September, 1971, based on interim audited accounts for that period, were £123,711.

Profits before taxation	£ 280,000
Less: corporation tax at 40 per cent.	112,000
Profits after taxation	168,000
Dividends (gross) of 34 per cent. on £300,000 ordinary share capital would absorb	102,000
Leaving for retention in the business	66,000

We have examined for periods relevant to this report the audited accounts of Alida Packaging Co. Limited ("Alida") of its two subsidiary companies, both of which are wholly owned, Alida and its subsidiaries are hereinafter referred to as "the Group". We report as follows:—

**Turnover and Profits** The combined turnover and profits of the Group, arrived at on the basis stated in (a) (i) below, were as follows:—

	Combined profits before	Combined profits
1971	Rs. 1,00,00,000	Rs. 1,00,00,000
1972	Rs. 1,00,00,000	Rs. 1,00,00,000

8 months ended			
30th September, 1971	908,891	150,675	26,964
			123,711

Notes:

The combined profits shown in Column [9] above are stated before providing taxation, but after charging all working expenses, depreciation, interest and directors' emoluments and after making such adjustments as we consider appropriate.

Records relating to the valuation of stocks and work in progress at accounting dates up to and including 31st March, 1969 are not now available although we understand that a physical inventory was undertaken at each of the accounting dates thereafter. We have therefore been unable to verify elsewhere that such stocks and work in progress were valued on consistent bases and we are therefore unable to confirm the allocation of the aggregate profit achieved

in the six months ended 30th September, 1971: had the present arrangements been in force the amounts payable would have been £26,000 and £13,000, respectively.

Net Tangible Assets. The following is a statement of the net tangible assets of Aulsebrook and of the Group respectively, based on the audited balance sheets on 30th September, 1971 after making such adjustments as we consider appropriate including the proceeds of the issue by Aulsebrook of £350,000 Ordinary shares of 10p each at 84p share and after deducting the estimated expenses of the Offer for Sale.

Aulsebrook		The Group	
£	£	£	£
	Fixed Assets		
£ 54,547	Freehold property	£ 54,547	

945,537				945,537
	12,153	Less: Mortgage on one freehold property		
	47,555	(Note (ii))	12,153	
59,706		Hire Purchase commitments (Note (ii))	47,555	
				59,706
585,828				585,828
	2,000	Interest in Subsidiaries		
	(44,254)	Share at cost		
		Less: Amount due to subsidiaries		

(42,284)	
543,565	586,829

The sum of the under his purchase contracts amounting to \$47,505 is included in the net income and contracts relative to \$28,898 were included in the net income of the corporation. These five purchase contracts relate to fixed assets having a book value of \$118,703 as of 30th September, 1971.

The provision for corporation tax payable on 31st January, 1973 represents tax at 40 per cent. on the profits for the six months to 30th September, 1971 (which will be included for tax purposes in the results for the year to 31st March, 1972).

At 30th September, 1971 there were contracts for capital expenditure amounting to £123,604. No further expenditure had been authorised by the Directors.

**Dividends**  
**Accounts**  
No dividends have been paid by Alida since its incorporation.  
No audited accounts of Alida or of its subsidiaries have been made up in respect of any period.

(b) to subscribe for 350,000 Ordinary shares of 10s each, in each case at a price of £94 per share less commission of 15 pence per share. The costs, charges and expenses of and incidental to this Offer for Sale excluding the commission referred to above shall be borne by the Association and, in addition, the Association shall, in consideration of the subscription of Alide's share capital and the capitalisation issue referred to above, pay to the Association and the adoption of new Articles of Association by Alide, the quotation fees payable to The Stock Exchange, London, all legal and accountancy expenses, all capital duties and other miscellaneous expenses and a sum of £100,000 in cash and are estimated to amount to £48,000 in the aggregate and are payable by Alide, Messrs. J. H. Morgan & Co. Ltd., as Agents for the Offer for Sale, to the Bank of England, on the date of the shares offered for sale and in full to the Brokers. The minimum amount which, in the opinion of the Brokers, is required for the Offer for Sale is £100,000. The names of the persons who are to be named in Paragraph 4 of the Fourth Schedule to the Companies Act 1948 is, viz.,

realisation of reserves, including part of the capital reserve arising from the sale of the property, in proportion to their holdings by way of dividend, and Allica adopted new Articles of Association and was converted into a public company; on the same day 1000 Ordinary shares of 10p each were allotted to nominees of Sanger & Friedlander Limited pursuant to Contract No. 1000/1000 as set out below:

**Articles of Association**

Allica's Articles of Association contain provisions (*inter alia*) to the following effect:—

Every member who is present in person shall have one vote and a show of hands and upon a poll every member present in person or by proxy shall have one vote for every 10p nominal of share capital of which he is the holder.

Every shareholder shall be entitled to one vote for every 10p nominal of share capital of which he is the holder.

[illegible]

the Exclusions Limited and Alike Engineering Limited were both incorporated in England as private companies under the Companies Act 1948 to 1987; each has an authorised, issued and fully paid share capital of £1,000 and 1,000 Ordinary Contracts of £1 each.

7. The following contracts (not being contracts entered into in the ordinary course of business) have been entered into during the two years preceding the date of this Offer for Sale and are or may be material—

(3) Dated 31st January, 1970 being transfers covering the whole of the issued share capital of Alike Exclusions Limited executed by Mr. R. H. Morley, Mr. H. A. Coward and Mr. S. Storer, the directors of Alike Exclusions Limited or its nominee in consideration of the allotment by Alike of a total of 1,000 Ordinary Contracts

Alide (4) being a memorandum confirming the terms of a verbal agreement entered into by the parties, so



# Businessman's Diary

By Order of the Board,  
F. G. BLOCK, Secretary.



## HOTELS AND CATERERS—Continued

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[illegible]



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## Lombard

### "£ in the pocket"—a Tory version

BY C. GORDON TETHER

A SPEAKER at last month's Tory Party conference struck a dissonant note by seeing a connection between Mr. Heath's undertaking not to take Britain into the European Community without the full-hearted support of the people and Mr. Wilson's assurance that the 1967 devaluation would not reduce the value of the £ in the pocket.

Another way in which the Government seems to be running a serious risk of creating such a rod for its own back is by continually proclaiming that Britain is on the brink of a great surge forward which will set living standards rising at a faster pace than ever before, and simultaneously dispose of the employment problem. For, with the international economic environment changing at the pace it has been of late, such predictions could easily be completely falsified.

The Tory Party's potential "£ in the pocket" crystal ball has taken two main forms. The first hinges on the proposition that the liberalising effect of the new strategies the Government has been developing since it came to power 17 months ago will be such as to banish the blight from which the nation's economic life has suffered during the past 10 years.

### The signs

The signs are, declared the Chancellor of the Exchequer in a recent major speech, that the economy is now moving into a sustained period of growth at a rate considerably higher than for a good many years.

The other way in which the Tory Party has been giving assurances to the public that it could eventually come to regret as deeply as the Labour Party has the "£ in the pocket" one is concerned with entry into the EEC. Here the Tory Party has been encouraging the belief that entry would flow from entry into the Common Market with the same certainty as night follows day. And one who has been feverishly handing out similar promises has been at meetings all over the country.

### Night and day

Higher living standards, more generous social services, longer holidays, shorter working hours, less unemployment and any other amelioration of the British way of life you could think up—all the public has been encouraged to believe would flow from entry into the Common Market with the same certainty as night follows day.

Taking the shorter-term aspect of the Tories' current "prosperity" is just around the corner "theme first, it is a fact that many countries besides our own have discovered that economic horizons are nowadays apt to display a most inconvenient disinclination to drink even when they are brought extremely close to the wall. And one who would have thought that this pointed to the need for most cautious negotiation about the effects of the Government's new strategies even before taking account of the changing character of the world economic climate.

Surely it would have been equally wise to refrain in any case from regarding the benefits to be reaped from entry into the EEC just in case the anti-market forces have been so strong that the net effect on Britain's economic life would be adverse turned out to be right.

### Confidence

The deterioration in the world economic climate and the unhappy implications this has for an EEC expansion movement that was already showing signs of losing momentum in more than a passing sense have made it even more important to soporify Britain's prospective EEC harvest.

Indeed the Government must itself be aware of this. For at the same time as Mr. Barber was speaking in London of the forthcoming British boom as though it was as near a certainty as making resolutions calling for Rippon was warning a German audience that the world faced a real danger of economic recession.

Since it is so difficult to feel economic expansion under way without inducing the business community that in law, confidence, one must expect Government to create the British side when presenting their views of the future. But to encourage hopes that are manifestly liable to prove false, is apt to be counter-productive. The Tories should now do some hard thinking about where the balance can most realistically be struck.

## THE LEX COLUMN

# Options in corporation tax reform

The Government's proposal for a corporation tax reform aimed at equalising the tax burden on distributed and retained income appears to have been universally welcomed to industry. But the only published data as to the Government's specific proposals, the Green Paper, left industry with premonitions on at least three scores. The first was the two-rate system was presented as being preferred to an "imputation" system; the second was the absence of any special measures for the group with largely overseas income; and the third was the proposal that intergroup dividends would have to be treated on a net of tax basis.

### Official thinking

There are now reasons for thinking not only that the Government's mind is more open on these three issues, but that it is if anything positively inclined to reverse its original position, in particular on the third proposal. The reasons emerged in a seminar on tax reform last

week, at which the Financial Secretary to the Treasury extended their *avoir fiscal* to a speaker. Though the two-rate system was judged administratively simpler at home, some of the considerations which had led the West German Government actually to switch from its two-rate to an imputation system next year had caused the Government here to feel the latter might be "equally acceptable."

The international considerations are not in themselves overwhelming. The international expert, J. van Hooten, recalling the Van den Tempel report's recommendation of the classical double tax system (in 1970) and the rejection of proposed tax changes by both Dutch and Italian Parliaments, argued that total tax harmonisation was neither necessary nor likely within the EEC. Equally, the Financial Times correspondent John Chown, who has estimated that the U.K. of a two-rate system at £30-60m. a year in foreign exchange, devalued, in particular on the third proposal. The reasons emerged in a seminar on tax reform last

### Industrial plea

But an unequivocal case for the imputation system was pleaded, by the head of taxation at Shell, on two relatively intangible grounds. The first concerned the need for certainty over taxation in corporate planning; the problem with a two-rate tax system is that where taxation depends on distribution, the actual cash return of an investment project will depend on a future and unknown dividend policy. Shareholder and company tax can be lumped together in a macro-economic framework but not for corporate cash flow purposes. The second point was that a two-tier rate system has the visible effect of increasing apparent earnings on a higher payout, and this could arguably encourage distribution rather than produce the neutral effect the Government apparently desired.

Now a moment's thought

shows that a spokesman for one of the U.K. major oil companies is not necessarily unbiassed over the choice of systems. Since BP and Shell totally lack any U.K. corporation tax charge, they can only hope for special dispensations under either of the proposed schemes. But the point is that it is very difficult to see how any special treatment could be accorded such companies under a two-rate tax system.

This is where the predominantly overseas earners can take heart from Mr. Patrick Jenkins' words, for in addition to dispelling any apprehensions about a change to net intergroup dividends, he made it clear that the Government is anxious to avoid any change which would produce a bias against the high invisible earners. Since it had already been made apparent in the Green Paper that that toll amount of any U.K. tax charge would be available for dividend relief, this new hint could be evidence of a pragmatic approach, whereas the strict logic of the French system, with its *précompte*, excludes any kind of relief for

domestic tax which has not been paid.

On balance, therefore, it would be a reasonable bet at this stage that the system to be chosen will be imputation rather than a two-rate tax on the one hand, and on the other that there will be some special relief for the predominantly overseas earners. The bet is only attractive if the odds are favourable, and from the stock market angle the potential areas of interest are the oils, and the like of BAT, and Coats Patons and, as has been noted here before, the preference sector.

### Discounting at work

Now in the case of preference shares, the stock market in its wisdom has already been doing some work at discounting the probabilities, so that by Wednesday the yield on the Burnham 8 per cent. issue for example was down to 8.3 per cent. (as against 9.1 per cent. for that company's 8½ per cent. Loan Stock 1981/96). The London stock market would logically be

since then must presumably be the reflection of a rather special technical position to judge by the unchanged 8.3 per cent. counter.

The conclusion here could be, then, that the gamble has gone far enough for the present. As to the overseas earners, one cited above has underperformed the market over the past three months, but in no case can one say for certain least of all for the oils and the like of BAT, that the threat of a corporation tax change is a prime factor. The insurance sector, meanwhile, seems unlikely to be much touched either way for the moment, since a U.K. underwriting recovery should give most of the groups an adequate U.K. tax liability. This leaves one speculating whether the recovering gold sector (and perhaps the still buoyant overseas plantations groups) will be the prospective net dividend yield to U.K. investors an inhibiting factor. To the extent that the markets are made in London this would logically be so.

## Commons statement on Compton report to-morrow

BY PHILIP RAWSTORNE

WITH further strains likely to be imposed on the Government's Ulster policy to-morrow by the report of the Compton inquiry, Mr. Harold Wilson to-day begins a five-day visit to Northern Ireland and Eire in the continuing search for a new way out of the crisis.

Sir Edmund Compton's long and detailed report, it is understood, will clear the Ulster security forces of general charges of brutality against detainees. But the inquiry's findings about the treatment of some individuals are expected to arouse enough disquiet to afford more scope for critics of the Interment policy.

### Policy success

Mr. Reginald Maudling, the Home Secretary, is expected to make a Commons statement on the report to-morrow. He may defend some of the tough action taken by the security forces by stressing the "near-war" conditions in Ulster and by pointing to recent successes the Government's policy has won against the IRA.

But the Government is unlikely to avoid embarrassment from the use that will be made of the report in the Ulster propaganda war.



Sir Edmund Compton

that plans for another meeting between Mr. Lynch and Mr. Heath—expected before the end of the year—were unchanged.

The inquiry's results should certainly provide new incentive to both Government and Opposition at Westminster to find a fresh approach to the problems of Northern Ireland.

Mr. Wilson, already well-briefed by the three governments and other parties involved, goes to Belfast to-day for a further round of talks that will include leading churchmen and others of influence outside the political groups.

He will go from Belfast to Dublin later in the week for discussions with Mr. Lynch and other Irish politicians before returning to London on Friday.

### Callaghan report

The Leader of the Opposition was given a report by Mr. James Callaghan at the weekend on his visit to Ulster last week for talks with Irish Labour leaders. Nothing that emerged at that meeting appears to have influenced the process of mediation. But Labour leaders hope to formulate at least the tentative foundations of a new policy in time for the Commons debate on Northern Ireland next week.

## Wilson starts visit today

BY JOHN GRAHAM

THE Northern Ireland Government and the Protestant community regard Mr. Wilson's visit to Belfast to-day as the most important political event for a long time. There is certainly the possibility of large-scale protest.

The details of his visit have still not been announced, and there will be thorough security precautions so long as he is here. He will see Mr. Brian Faulkner, the Prime Minister, as well as elected representatives of the Catholic community.

### Paisley call

The more militant Protestants are incensed at his visit. The Rev. Ian Paisley has called for an upsurge of Protestant feeling, the like of which has never been known before in Northern Ireland. Mr. Paisley said that he was not suggesting anybody should break the law, but he wanted Protestants to show that they detest Mr. Wilson's policies and will not have them.

Mr. Wilson is identified completely with the abolition of the "B" Specials and the disarming of the police. Both of these are still bitterly resented by the majority here, even though the police are now being steadily retrained.

There is little doubt that this week will be of cardinal political importance.

### BBC office in New Delhi may reopen

NEW DELHI, Nov. 14. THE BBC is likely to be allowed by the Indian Government to reopen its office in New Delhi. The BBC's director of External Broadcasting, is here to hold talks on the office which was closed about a year ago when the Indian Government refused to allow the BBC to broadcast from India. The Government's attitude has been influenced by the BBC's reporting of events in Pakistan, and Mrs. Indira Gandhi, the Prime Minister, made the unusual gesture of allowing herself to be interviewed by its representative.

### Bid to censure Houghton fails

A BID by critics in his Soverly constituency to censure Mr. Douglas Houghton, chairman of the Parliamentary Labour Party, was defeated at a three-hour week-end meeting of the executive committee of the Divisional Labour Party. Representatives of Todmorden Trades and Labour Council moved a resolution condemning Mr. Houghton's resignation as MP for applying for the Children's Hundreds. But the meeting decided by 18 votes to 12 in support of Mr. Houghton's explanation of why he had resigned. No further action is to be taken by the local executive.

## Tough pay stand likely by engineer employers

By Alex Hendry

ENGINEERING employers are expected to take a tough line to-morrow when they reply to the unions' demand for an extra £700m. a year to swell their members' pay packets.

The unions want an across-the-board increase, improved minimum rates, longer holidays, equal pay, and a shorter working week.

They are likely to be offered a small improvement in minimum rates with nothing across the board and an implacable defence of the existing 40-hour week.

This increases the possibility, as reported in the Financial Times last week, that the gap between the two sides would be so great that the national talks would break down.

Union leaders would then have to take the claim to individual employers as the draughtsmen have been doing since the beginning of the year when their national negotiations broke down.

## Mobil plans to expand refinery

BY ADRIAN HAMILTON

MOBIL OIL has announced plans for a major £13.5m. expansion programme to its refinery at Coryton, Essex. The programme, expected to be completed in 1973, will raise capacity from 140,000 barrels-a-day throughput to 180,000 barrels per day.

In addition to "de-bottlenecking"—or streamlining—the crude distillation unit, capacity of the reformer section is to be improved and crude oil storage capacity is to be raised with the installation of two 650,000 barrel tanks.

At the same time, distribution facilities are being improved with the construction of a new £1m. rail loading equipment, now being undertaken, and increasing the jetty loading facilities on the Thames Estuary.

The move comes within two years of the completion of a £20m. project to double refinery capacity at Coryton with the addition of a large crude oil distillation unit and other plant. Mobil's decision to raise the capacity again reflects the general rise in oil demand following the energy crisis of last winter.

Although consumption growth has slackened recently with the mild weather, most of the major oil groups now feel that demand is likely to press against available processing capacity for some years to come.

Shell, for instance, has now announced plans to more than double capacity at its Shell Haven complex at the cost of about £50m. and is now raising capacity at its Stanlow refinery from 300,000 barrels to 350,000 barrels a day.

Burmah is also increasing its processing capacity at Ellesmere Port while Amoco is building a new refinery at Milford Haven.

Other "green site" complexes are planned by Esso-Burmah, Occidental and Mureco-ENI in the South-East.

### U.K. expansion

Total refinery capacity in the U.K., which now stands at about 2,250m. barrels a day, is expected to rise to over 2.7m. barrels a day by 1973 and to more than 3m. barrels a day by 1975.

Norsk Hydro, in which the Norwegian Government has a controlling interest, and Norsk Braendsele, a Norwegian oil company closely associated with British Petroleum, have finalised an agreement to build a jointly owned oil refinery at Mongstad, West Norway.

Norsk Hydro will have a 60 per cent. interest in the refinery, and Norsk Braendsele 40 per cent. It will have an initial capacity of some 4m. tons per year, and construction cost is now estimated at about £50m. Completion is envisaged by end-1974 or early 1975.

## German metal union may call strike to-day

BY CHRISTOPHER LORENZ

LEADERS of the West German metal workers' union will meet to-morrow to decide whether to call a strike in the Stuttgart area, one of the country's metal industry centres, over their disputed 11 per cent. wage claim.

Following a ballot of union members, all the indications are that a stoppage will be called, although the employers to-day made what seems to be the first move to reopen the deadlocked negotiations.

The vote, held on Friday in the North Baden-Nordrhein negotiating area, produced a 90 per cent. majority in favour of industrial action. 3 per cent. more than is needed to allow the union to proceed with strike preparations.

North Baden was the first of the country's 20 negotiating regions to go to mediation, and the first in which the established machinery has failed to produce an agreement. Another key region, North Rhine-Westphalia, is now in the process of mediation. Here the attempt to produce a mediation proposal acceptable to at least one side is proving so difficult that the deadline for action has been extended from to-morrow until Thursday.

North Baden and North Rhine-Westphalia are the two key areas in the country's wage talks, together accounting for about 1.5m. of West Germany's 4.3m. metalworkers. The settlements reached here will have a strong influence on those elsewhere.

A spokesman for the union, I. G. Metall, said to-day that the union would call a strike if the Government could make Thursday, allowing for the fact that Wednesday is a German public holiday.

In the wake of the North Baden strike ballot, the employers seem to be taking a softer line. To-day, one of the chief representatives said he could envisage new negotiations on the basis of a 7 per cent. wage increase, with an agreement to run for 12 months. Last week, the employers rejected the mediator's proposal of a 7.5 per cent. rise.

### MINISTER TO MEET MPs ON COAL IMPORTS

MINERS' MPs, worried about the size of coal imports, are to see Mr. John Eden, Minister for Industry, on Thursday. Mr. Roy Mason, MP for Barnsley, who will be at the meeting, said yesterday that 6m. tons of coal were being imported into this country, and this was likely to be increased.

"The Tories could use coal imports to undermine the overtime ban and possible strike by the miners in support of their pay claim," he added. Distributed and undistributed coal stocks in this country now stood at 32m. tons, "so it is not necessary to import coal at this rate."

Continued from Page 1

## Decisive talks on Rhodesia start to-day

been claimed (by Mr. Joseph Godber) in the House of Commons that Rhodesia has dropped its demand for a referendum on Epworth and Chiswashe missions near Salisbury.

Furthermore, at its last two party congresses the ruling Rhodesian Front unanimously approved resolutions calling for implementation of the party policy of providing separate facilities for the different races. It wants to end multiracial swimming pools, parks and even post offices.

### Rubber stamp

The party is also pushing for the siting of African townships in black-designated areas away from the main towns and cities. While this is not Government policy as yet, it does show just how wide is the gap between the two sides on this point.

The Rhodesians might conceivably accept the establishment of some sort of commission to look into race problems, but it is hard to see them agreeing to its role being anything more than advisory.

In the greatest difficulty of all, The British Government has to be satisfied that any agreement reached is acceptable to the people of Rhodesia, and it seems that neither side has reached a point where it may be reached without an agreed test of acceptability went against it.

The feeling in Salisbury is that the commission—or whatever vehicle is chosen to test the views of Rhodesians as a whole—will be little more than a rubber stamp. Mr. Cecil Smith is hardly likely to make concessions only to have them thrown back in his face.

That being said, no one here underestimates the very real problem of showing that there is some popular African support for any deal. The chiefs are likely to go along with anything Mr. Smith accepts, but African politicians—whether in restriction or not—are most unlikely to agree to any formula which leaves the Rhodesian Front as firmly in the saddle as ever.

### Likely outcome

In addition to the actual test of acceptability, there are a host of problems involved in the negotiation of a settlement. For instance, how would the terms be explained to the black majority? Would Joshua Nkomo—in restriction since 1964—and other detained leaders be allowed to support (or support the agreement) as was envisaged under both Tiger and Fearless?

Would Mr. Smith be required to form a broadly-based administration including Africans? Was also planned on Fearless? Even if a political agreement is reached, there will still be significant financial and economic problems to be resolved.

It may be, as some people here believe, that the British accept the weakness of their hand, and that the Rhodesians are prepared to do an about-turn, the chances of settlement seem pretty slim.

IN LONDON, Mr. Denis Healey, shadow Foreign Secretary, said that the Labour Government miscalculated over

the introduction of sanctions against Rhodesia in 1966. "It was a miscalculation to believe the white Rhodesians would surrender to sanctions as fast as was then expected," he said.

In a radio interview, Mr. Healey, who was Defence Minister in the last Government, added that he did not think it was realistic to believe that sanctions would now force the Smith regime to its knees. But Rhodesian businessmen wanted sanctions to end, and "this is the only reason why Smith is negotiating."

Lord Alton, a former Conservative Minister who acted as emissary to Rhodesia for Mr. Wilson in 1967, said he did not really welcome Sir Alec's visit. "I am sorry he has come here, but he was quite certain that the conditions which he would feel were acceptable to the U.K. have been worked out by the officials and Lord Goodman in the earlier discussions," he said.

## Finance for Expansion

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## Weather

### U.K. TO-DAY

England and Wales will be mainly dry, although rather cloudy. Some light rain or drizzle is likely in the more hilly areas of N. Wales and N.W. England. Brighter spells are likely to E. and Central parts.

In Scotland and N. Ireland, it will be mainly cloudy and occasional rain is likely in W. Scotland and N. Ireland.

Temperatures will be near normal although some S. counties of England will have frost at first. London: S.E. Cent. S. E. S.W. Cent. N. and N.E. Eng. E. Angles Midlands; Channel Is. S. Wales. Rather cloudy, some bright or sunny intervals. Dry. Wind N.W. becoming S.W. light. Max. 10C (50F).

N. Wales; N.W. Eng. Lakes; I. of Man; S.W. Scot.; Glasgow; N. Ireland.

Cloudy; some rain, chiefly near coasts and over hills. Hill fogs. Wind S.W. moderate or fresh. Max. 10C (50F).

Borders; E. Scot.; Edinburgh; Dundee.

Mostly dry; some high intervals. Wind S.W. moderate, perhaps fresh. Max. 10C (50F).

Argyll; N.W. Scot.; Cent. Highlands.

Cloudy; occasional rain. Hill fogs. Wind S.W. fresh or strong, perhaps gale. Max. 10C (50F).

OUTLOOK: Some rain at first in England and Wales, otherwise mainly dry but colder with night frost. Lighting up: London 16.42.

### BUSINESS CENTRES

	Yday	Mid-day	Yday	Mid-day
Amsterdam	R 10 55	Mancham	F 10 14	
Bombay	R 10 55	Medan	F 10 14	
Berlin	R 10 55	Mexico	F 10 14	
Bombay	R 10 55	Milan	F 10 14	
Bombay	R 10 55	Montreal	F 10 14	
Bombay	R 10 55	Moscow	F 10 14	
Bombay	R 10 55	New York	F 10 14	
Bombay	R 10 55	Osaka	F 10 14	
Bombay	R 10 55	Paris	F 10 14	
Bombay	R 10 55	Seoul	F 10 14	
Bombay	R 10 55	Singapore	F 10 14	
Bombay	R 10 55	Tokyo	F 10 14	
Bombay	R 10 55	Yokohama	F 10 14	

### HOLIDAY RESORTS

	Yday	Mid-day	Yday	Mid-day
Alexandria	R 10 55	Israhail	F 10 14	
Alexandria	R 10 55	Jersey	F 10 14	
Alexandria	R 10 55	Las Palmas	F 10 14	
Alexandria	R 10 55	London	F 10 14	
Alexandria	R 10 55	Madrid	F 10 14	
Alexandria	R 10 55	Manila	F 10 14	
Alexandria	R 10 55	Mexico	F 10 14	
Alexandria	R 10 55	Moscow	F 10 14	
Alexandria	R 10 55	New York	F 10 14	
Alexandria	R 10 55	Osaka	F 10 14	
Alexandria	R 10 55	Paris	F 10 14	
Alexandria	R 10 55	Seoul	F 10 14	
Alexandria	R 10 55	Singapore	F 10 14	
Alexandria	R 10 55	Tokyo	F 10 14	
Alexandria	R 10 55	Yokohama	F 10 14	

S-Sunny, F-Fair, C-Cloudy, R-Rain.

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